CARGO AND ACCESSORY COMPARTMENTS -

DESCRIPTION AND OPERATION

1. Description

A. The cargo and accessory compartments include lower cargo compartments, electrical/electronic compartments, landing gear wheel wells, air-conditioning and cabin compressor compartments, and an aft accessory compartment.

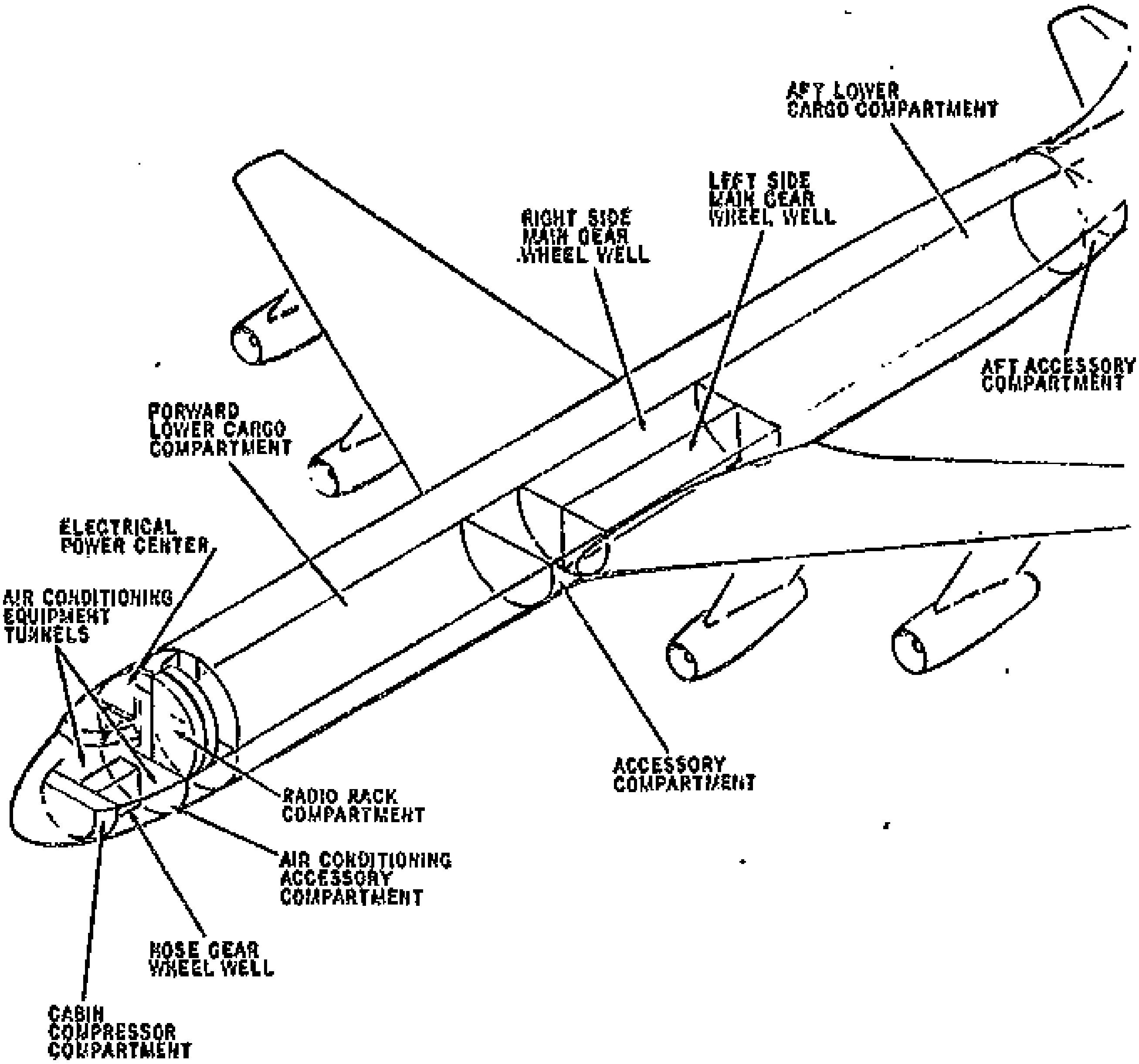
B. The lower cargo compartments comprised of forward and aft compartments, are located below the floor level. The forward compartment extends from the forward passenger compartment bulkhead to the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft cargo compartment bulkhead.

C. Electronic components are located primarily in the radio rack in the aft left side of the flight compartment. The radio rack houses electronic components such as flight recorders, transceivers, computers, compasses, weather radar, receivers, etc., and is ventilated with cooling air from the passenger compartment air conditioning system.

D. The electrical power center is located in the flight compartment just aft of the flight engineer's station and contains the systems engineer's control panel, the EPC circuit breaker panel, equipment panels, control panels, switches, and other electrical components used in the various systems of the airplane. These panels provide a central location for most of the relays, timers, and amplifiers used in the electrical system.

E. The main gear wheel wells are located in the lower segment of the fuselage below the wing center section. The wheel wells house the main landing gear, when retracted, and additional hydraulic system components, such as reservoirs, filters, accumulators, pressure gages, pumps, and service panels. The inboard wheel well doors can be opened while the airplane is on the ground for easy access to the hydraulic components. Shields, in each of the main wheel wells, protect the components from damage in case of tire blowout. The shields are hinged for easy access to components in the wheel wells.

F. The nose gear wheel well located in the forward lower section of the fuselage, houses the nosewheel, when retracted, and other components such as control valves, accumulators, and landing lights, and provides access to the forward accessory compartment door. The forward nose gear doors can be opened for easy access to the wheel well when the gear is extended. The main and nose gear wheel wells are equipped with lights controlled by a switch located in the external power receptacle panel.



HA2-1427

Cargo and Accessory Compartments
Figure 1

G. The cabin compressor compartment is located forward of the nose gear wheel well, the pressurized air-conditioning accessory compartment is located aft of the nose gear wheel well, and the air-conditioning equipment tunnels are located on either side of the nose gear wheel well. The compartments are below floor level and house the air-conditioning and cabin compressor equipment.

H. The aft accessory compartment is located aft of the aft lower cargo compartment, forward of the aft passenger compartment bulkhead, and below floor level. The compartment contains the pressurized water system tank and accessories, toilet waste system lines and valves, cabin air outflow valves, tail assembly deicing ducts, and miscellaneous components.

CARGO AND ACCESSORY COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

   A. The cargo and accessory compartments include lower cargo compartments, electrical/electronic compartments, landing gear wheel wells, air-conditioning and cabin compressor compartments, aft accessory compartment, and main cabin cargo compartment for all freighter configuration.

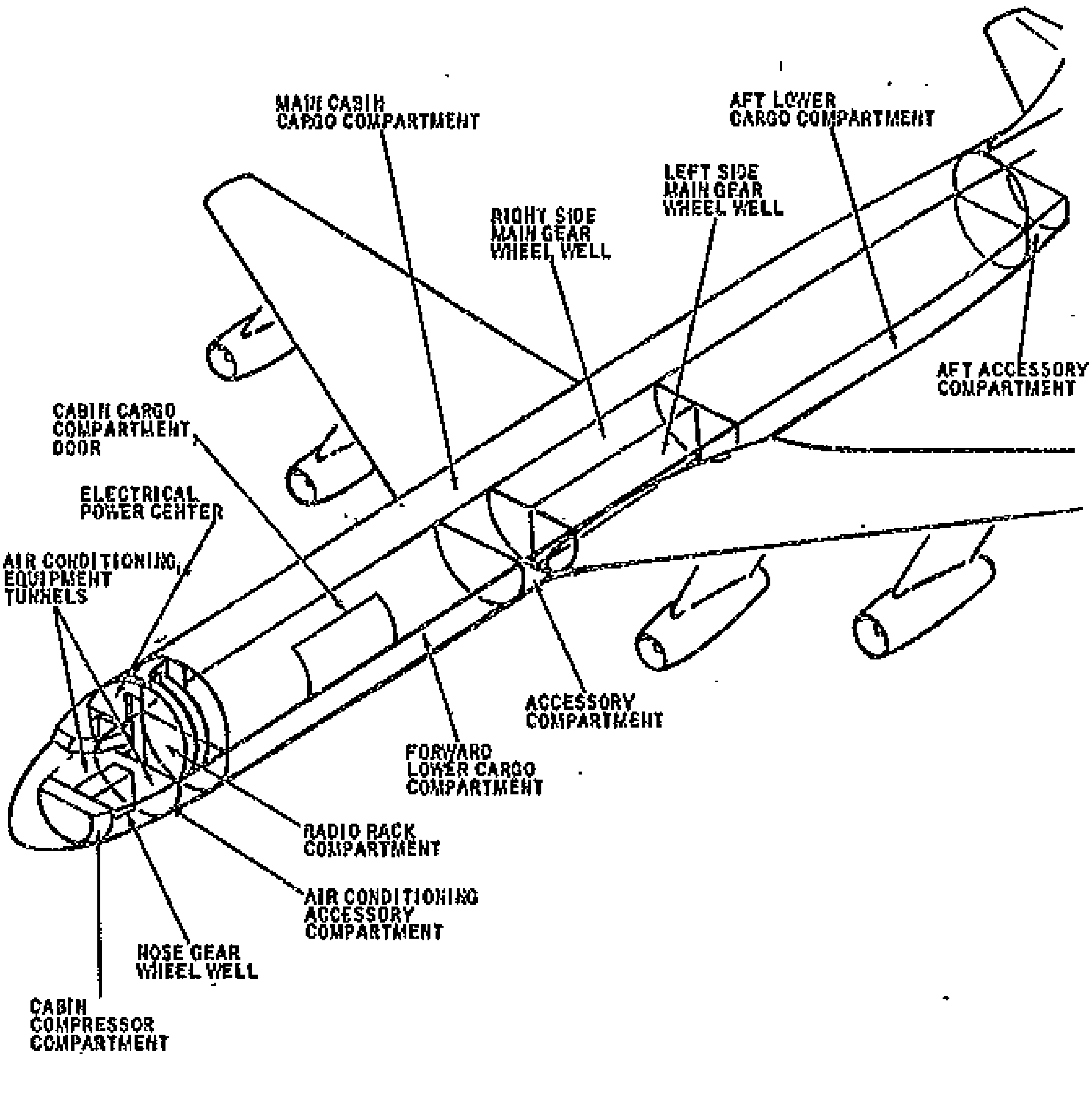
   B. The lower cargo compartments comprised of forward and aft compartments, are located below the floor level. The forward compartment extends from the forward passenger compartment bulkhead to the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft cargo compartment bulkhead.

   C. Electronic components are located primarily in the radio rack in the aft left side of the flight compartment. The radio rack houses electronic components such as flight recorders, transceivers, computers, compasses, weather radar, receivers, etc., and is ventilated with cooling air from the passenger compartment air conditioning system.

   D. The electrical power center is located in the flight compartment just aft of the flight engineer's station and contains the systems engineer's control panel, the EPC circuit breaker panel, equipment panels, control panels, switches, and other electrical components used in the various systems of the airplane. These panels provide a central location for most of the relays, timers, and amplifiers used in the electrical system.

   E. The main gear wheel wells are located in the lower segment of the fuselage below the wing center section. The wheel wells house the main landing gear, when retracted, and additional hydraulic system components, such as reservoirs, filters, accumulators, pressure gages, pumps, and service panels. The inboard wheel well doors can be opened while the airplane is on the ground for easy access to the hydraulic components. Shields, in each of the main wheel wells, protect the components from damage in case of tire blowout. The shields are hinged for easy access to components in the wheel wells.

   F. The nose gear wheel well located in the forward lower section of the fuselage, houses the nosewheel, when retracted, and other components such as control valves, accumulators, and landing lights, and provides access to the forward accessory compartment door. The forward nose gear doors can be opened for easy access to the wheel well when the gear is extended. The main and nose gear wheel wells are equipped with lights controlled by a switch located in the external power receptacle panel.



Cargo and Accessory Compartments
Figure 1

G. The cabin compressor compartment is located forward of the nose gear wheel well, the pressurized air-conditioning accessory compartment is located aft of the nose gear wheel well, and the air-conditioning equipment tunnels are located on either side of the nose gear wheel well. The compartments are below floor level and house the air-conditioning and cabin compressor equipment.

H. The aft accessory compartment is located aft of the aft lower cargo compartment, forward of the aft passenger compartment bulkhead, and below floor level. The compartment contains the pressurized water system tank and accessories, toilet waste system lines and valves, cabin air outflow valves, tail assembly deicing ducts, and miscellaneous components.

I. The main cabin cargo compartment extends from the radio rack and flight compartment aft to the pressure bulkhead in the tail section. The cabin contains no windows or other passenger accommodations such as seats, lavatories, oxygen, or galleys. The cabin is equipped with a cargo loading system (universal for standard tracks) including swivel tie down rings, an aft cargo barrier net, a forward cargo restraint net, and a crew lavatory.

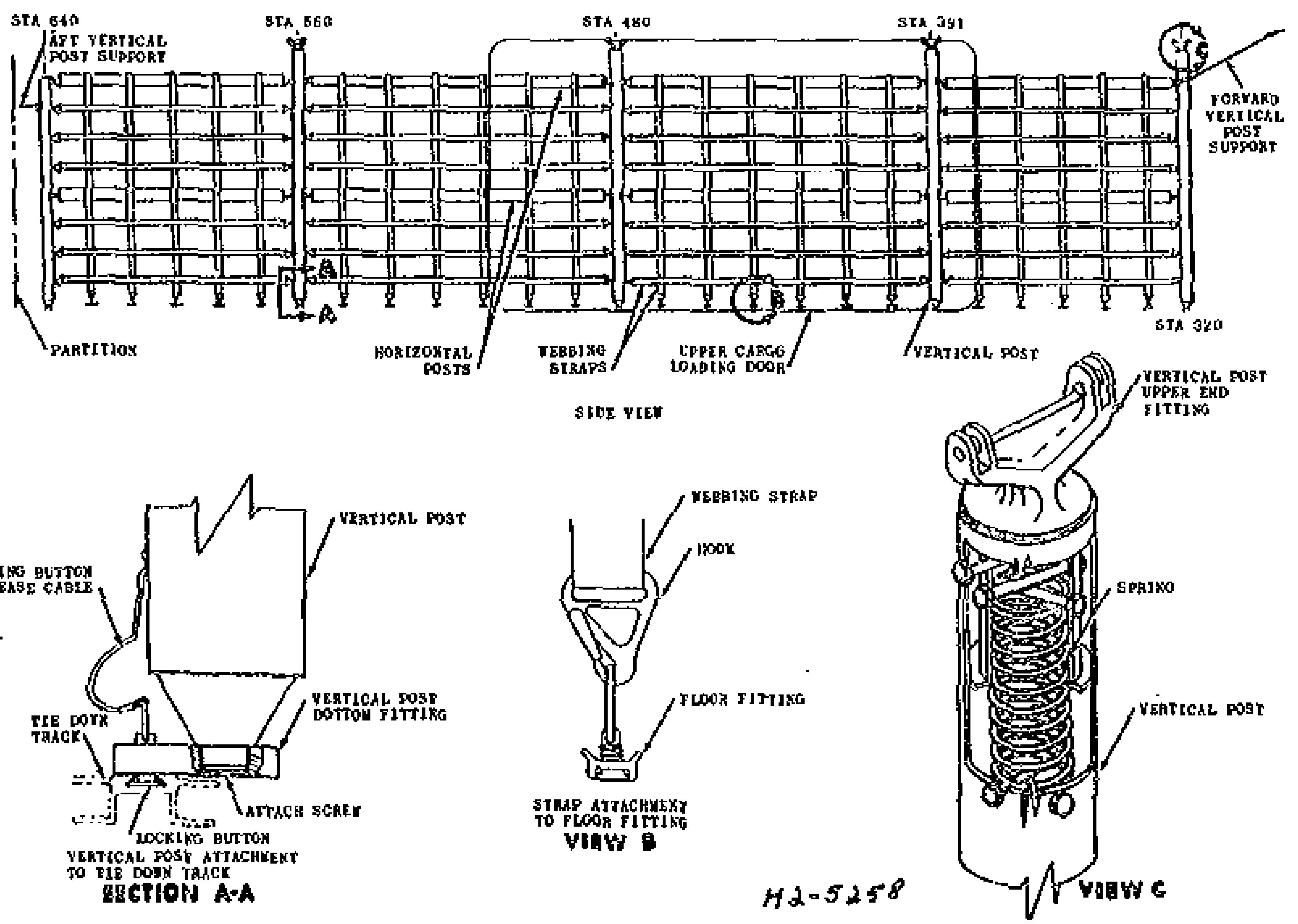
J. The forward entrance door, over wing emergency exits, aft entrance door, and both service doors are provided with windows. The forward entrance door is provided with an evacuation slide, and the remaining doors are equipped with floor fittings to receive a slide girt bar.

CARGO NETS - DESCRIPTION AND OPERATION

1. Description

A. The cargo aisle nets are installed in the main cabin cargo area when operating under bulk cargo loading conditions. This forms an access aisle through the cargo area to the left of the cabin centerline.

B. The nets are installed in sections. The number of sections required is dependent upon location of the cabin divider partition in the various passenger/cargo combinations. Each section consists of dacron webbing supported by vertical posts. All but the aft post attach at the top to hook-shaped fittings installed on the upper fuselage frames. These are the same fittings used to support the folding stowage rack struts. The top of the aft post is attached to the cabin divider partition by a support fitting. The top of the forward post is additionally supported by a rod attached to the crew galley structure. Fittings that attach to the cargo tie down track support the posts at the bottom. Snap hooks attach the webbing straps to eyebolts on the vertical posts and to fittings attached to the cargo tie down track. The vertical webbing straps are looped at the top and center. Horizontal posts pass through these loops and attach to the vertical posts.



Cargo Aisle Nets
Figure 1

CARGO NETS - MAINTENANCE PRACTICES

1. General

   A. Normal in-service use of cargo nets will result in abrading, fraying, and other damage to the net material which can be repaired per the following procedures.

   WARNING: A-254 ADHESIVE HAS A 45°F (7.2°C) FLASH POINT. USE IN AN OPEN, WELL VENTILATED AREA AWAY FROM SOURCES OF FIRE.

2. Tools and Material Required

   NOTE: Equivalent substitutes may be used instead of the following listed items.

Item	Name	Number	Manufacturer	Use
A	Knife	--	Obtain locally	To sear or cut net webbing
B	Adhesive	A-254	Duracote Co. 2700 W. 3rd St. Los Angeles, Calif.	Seal webbing material to prevent unraveling
C	Dacron webbing (2 x 0.20)	Pattern No. WD-331	Phoenix Trimming Co. Chicago, Ill.	To provide splice material

3. Cargo Barrier Web Net Repair Procedures

   A. Minor abrasion and fraying

      (1) Sear damaged area with heated knife.

      (2) Apply A-254 adhesive by brush to surface and allow to air dry for 20 minutes.

   B. Abrasion with considerable fraying

      (1) Sear damaged area with heated knife.

      (2) Apply A-254 adhesive by brush to surface and allow to air dry for 20 minutes.

      (3) Sear cut a splice from dacron webbing to cover damage area plus 3 inches each side of damage.

(4) Dip seared edges of splice in A-254 adhesive and allow to air dry for 20 minutes.

(5) Sew splice to cover damage area plus 3 inches each side of damage.

NOTE: Stitch pattern to be same as original stitch pattern.

C. Minor cut or severe abrasion

(1) Perform steps 3B(1) through 3B(4).

NOTE: Make and sew splice to cover damage area plus 4 to 5 inches each side of damage if damage is in a radial web.

D. Puncture

(1) Perform steps 3B(1) through 3B(4).

NOTE: Make and sew splice to cover damage area plus 4 to 5 inches each side of damage.

E. Severed web

(1) Remove damaged section removing a minimum amount of webbing.

(2) Sear web ends with heated knife.

(3) Dip seared web ends in A-254 adhesive and allow to air dry for 20 minutes.

(4) Sear cut a splice (splice to overlap 4 to 5 inches each end on peripheral webbing and 6 inches minimum on radial webbing).

(5) Dip seared edges of splice in A-254 adhesive and allow to air dry for 20 minutes.

(6) Sew splice with overlap in step E(4) using a stitch pattern same as original stitch pattern.

F. Damaged web near fitting

(1) Perform steps 3E(1) through 3E(6).

G. Damaged web joint which warrants a splice

(1) Remove entire web joint.

(2) Install new web joint in form of T or cross as required per steps 3E(1) through 3E(6).

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CARGO NETS - MAINTENANCE PRACTICES

1. General

   A. Normal in-service use of cargo nets will result in abrading, fraying, and other damage to the net material which can be repaired per the following procedures.

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   NOTE: Equivalent substitutes may be used instead of the following listed items.

Item	Name	Number	Manufacturer	Use
A	Knife	--	Obtain locally	To sear or cut net webbing
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C	Dacron webbing (2 x 0.20)	Pattern No. WD-331	Phoenix Trimming Co., Chicago, Ill.	To provide splice material

3. Removal/Installation Cargo Nets

   A. Remove Aisle Nets

      (1) Unhook webbing straps from vertical posts and floor fittings.

      (2) Slide floor fittings to nearest holes in tiedown track and lift out.

      (3) Remove pip-pins from horizontal posts and remove posts and webbing.

      (4) Remove upper supports from forward and aft vertical posts.

         NOTE: Since the top of the aft post has no attachment to the fuselage, it must be removed as the next step following the removal of the support.

(5) Remove vertical posts.

(a) Pull up on cable attached to bottom fitting and slide fitting fore or aft to nearest holes in tiedown track.

(b) Lift up on post to compress upper end fitting spring, swing base inboard and lift it off upper fuselage fitting.

B. Install Aisle Nets

(1) Install vertical posts.

(a) With base inboard, hang post on upper fuselage fitting.

(b) Lift up on post to compress upper end fitting spring, swing base outboard and place buttons on bottom fitting in holes in tiedown track.

(c) Slide fore or aft to lock bottom fitting to track.

(d) Install supports for forward and aft posts.

NOTE: Since the top of the aft post has no attachment to the fuselage, the support must be installed as the next step after the post bottom fitting is locked in the floor track.

(2) Thread horizontal posts through webbing loops and secure to vertical posts with pip-pins.

(3) Hook webbing straps to vertical posts.

(4) Place webbing attach fittings in holes in tiedown track, slide fore or aft to proper position, and hook webbing straps to fittings.

4. Cargo Barrier Web Net Repair Procedures

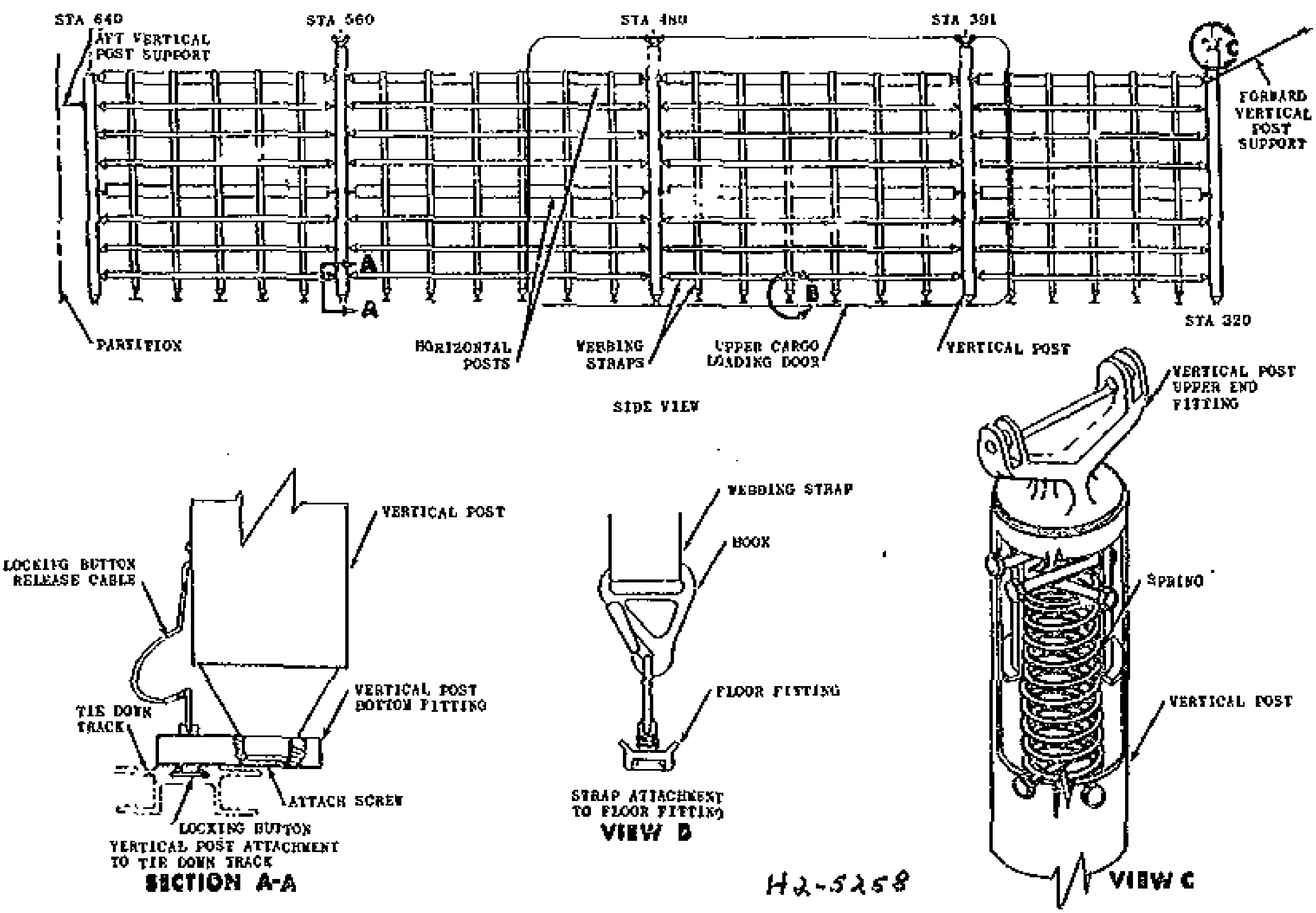
A. Minor Abrasion and Fraying

(1) Sear damaged area with heated knife.

(2) Apply A-254 adhesive by brush to surface and allow to air dry for 20 minutes.

B. Abrasion With Considerable Fraying

(1) Sear damaged area with heated knife.



Cargo Aisle Nets
Figure 201

TEMPORARY REVISION 25-37

FILING INSTRUCTIONS: Insert this Temporary Revision adjacent to 25-50-1, CODE 2, Page 204, Maintenance Practices, or in microfilm supplement by Chapter/Section/Subject.

Retain this Temporary Revision until notified to remove it.

DESCRIPTION AND REASON: This Temporary Revision adds coverage to provide a NOTE which describes limitations for operating the aircraft with a damaged cargo barrier net.

EFFECTIVITY: AC

Revise Page 204, Paragraph 4.E.(1) to add NOTE.

NOTE: The maximum allowable cargo load on the main deck with one (1) radial of concentric strap completely severed is 66,000 pounds of cargo. The DC-8 Structural Repair Manual, Chapter 53-2-3, paragraph 18, provides repair limits for cuts in the radial strap that do not exceed 0.15 inch. Cargo nets that have damage limits greater than 0.15 inch may be flown with 66,000 pounds of cargo to allow the aircraft to be returned to a maintenance facility for repairs. Damage is to be repaired before further flight.

(2) Apply A-254 adhesive by brush to surface and allow to air dry for 20 minutes.

(3) Sear cut a splice from dacron webbing to cover damage area plus 3 inches each side of damage.

(4) Dip seared edges of splice in A-254 adhesive and allow to air dry for 20 minutes.

(5) Sew splice to cover damage area plus 3 inches each side of damage.

NOTE: Stitch pattern to be same as original stitch pattern.

C. Minor Cut or Severe Abrasion

(1) Perform steps 3.B.(1) through 3.B.(4).

NOTE: Make and sew splice to cover damage area plus 4 to 5 inches each side of damage if damage is in a radial web.

D. Puncture

(1) Perform steps 3.B.(1) through 3.B.( ).

NOTE: Make and sew splice to cover damage area plus 4 to 5 inches each side of damage.

E. Severed Web

(1) Remove damaged section removing a minimum amount of webbing.

(2) Sear web ends with heated knife.

(3) Dip seared web ends in A-254 adhesive and allow to air dry for 20 minutes.

(4) Sear cut a splice (splice to overlap 4 to 5 inches each end on peripheral webbing and 6 inches minimum on radial webbing).

(5) Dip seared edges of splice in A-254 adhesive and allow to air dry for 20 minutes.

(6) Sew splice with overlap in Step E.(4) using a stitch pattern same as original stitch pattern.

F. Damaged Web Near Fitting

(1) Perform steps 3.E.(1) through 3.E.(6).

G. Damaged Web Joint Which Warrants a Splice

(1) Remove entire web joint.

(2) Install new web joint in form of T or cross as required per Steps 3.E.(1) through 3.E.(6).

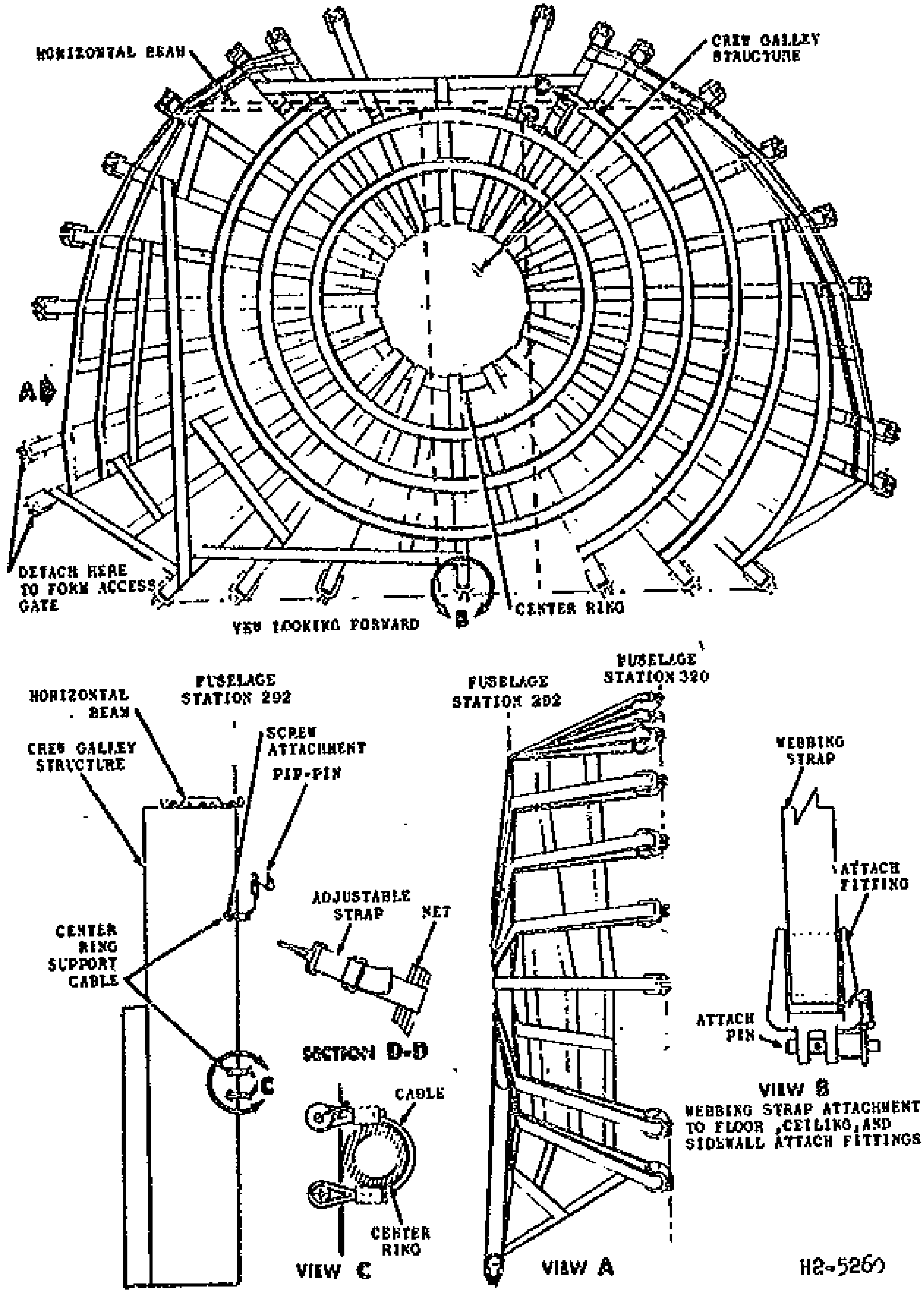
FORWARD CARGO RESTRAINT BARRIER NET - DESCRIPTION AND OPERATION

1. Description

   A. The forward cargo restraint barrier consists of a horizontal beam and vertical post, which also supports the crew galley structure, and a radial cargo net.

   B. A floating serrated fitting at each end of the beam is attached to the fuselage structure. The crew galley structure is attached between the beam and the cabin floor at the center of the beam.

   C. The net consists of a center ring 25 inches in diameter with 1/4-inch thick dacron webbing straps looped and sewn around it. These straps are reinforced and spaced by circular straps concentric to the ring. Pip-pins are used to attach the ends of the radial straps to floor fittings and special sidewall and ceiling fittings. These fittings are designed for nine-G crash loads. The removal of the two lower left side pip-pins allows that portion of the net to be folded back to form a gate for access to the cargo area. There are four short cables looped over the center ring and attached to the vertical structure of the crew galley. Short adjustable straps tie seven radial straps to the horizontal beam, and six radial straps along the right side to the fuselage. The cables and adjustable straps aid in holding the net in position.



Forward Cargo Restraint Barrier
Figure 1

FORWARD CARGO RESTRAINT BARRIER NET - MAINTENANCE PRACTICES

1. Removal/Installation - Cargo Restraint Barrier Net

A. Remove Net

NOTE: The net weighs approximately 230 pounds. For ease of handling, it is recommended that the net be lowered onto a pallet as it is disconnected. The pallet should be a minimum size of 30 x 30 inches.

(1) Unhook seven straps between net and crew galley structure, and six straps between net and fuselage sidewall at right side.

(2) Remove pins and disconnect webbing straps from fuselage ceiling, sidewall, and floor fittings.

(3) Supporting center ring, disconnect four cables securing it to galley structure and remove net.

B. Install Net

(1) Place center ring in position against crew galley structure.

(2) Move webbing straps to proper location on ring, and connect four cables securing ring to galley structure.

NOTE: Each strap is numbered. The ring is marked off in sections indicating which straps are to be located in each section.

(3) Install pins connecting straps to fuselage ceiling, sidewall, and floor fittings.

NOTE: The fuselage fittings are numbered to correspond with the strap numbers.

(4) Connect seven adjustable straps between net and galley structure, and six adjustable straps between net and fuselage sidewall at right side.

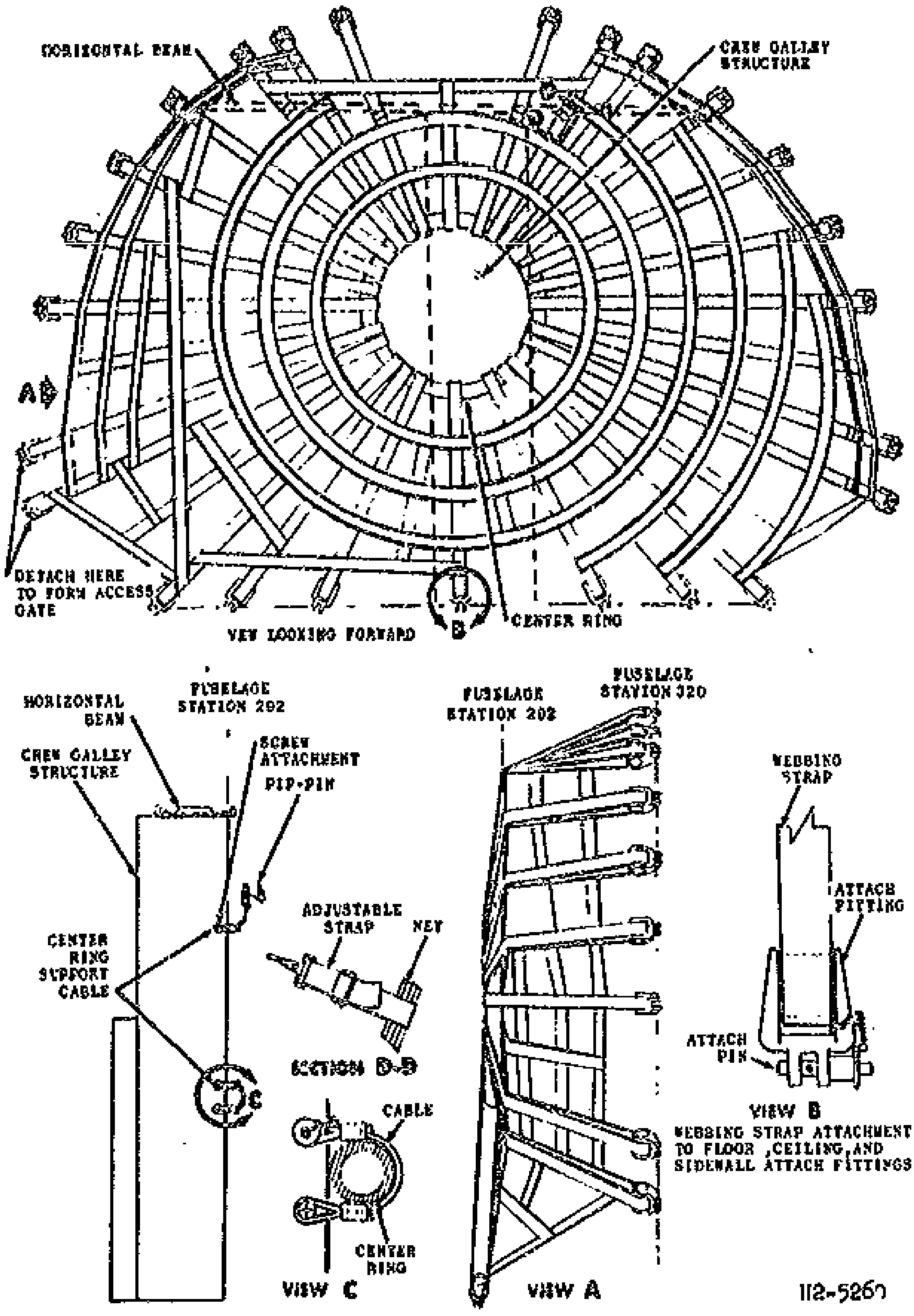
(5) Adjust straps to take up all slack in net.

C. Remove Crew Galley Structure and Horizontal Beam

(1) Remove crew galley unit.

(2) Remove bolts securing galley structure to cabin floor.

(3) Remove bolts attaching galley structure to beam, and slide structure from under beam.



Forward Cargo Restraint Barrier
Figure 201

(4) Remove bolts securing beam end fittings to fuselage fittings and remove beam.

CAUTION: THERE IS VERY LITTLE DIFFERENCE BETWEEN THE LENGTH OF THE BEAM AND THE WIDTH OF THE FUSELAGE. TAKE CARE TO AVOID DAMAGE TO THE ADJACENT LIGHT FIXTURES AND FUSELAGE LINING WHEN REMOVING THE BEAM.

D. Install Crew Galley and Horizontal Beam

(1) Attach fuselage fittings for horizontal beam.

(2) Place crew galley in position and insert floor attach nuts. Do not tighten nuts

(3) Place horizontal beam in position and connect to fuselage fittings with attach bolts. Do not tighten bolts.

CAUTION: WHEN PLACING THE BEAM IN POSITION, TAKE CARE TO AVOID DAMAGE TO THE ADJACENT LIGHT FIXTURES AND FUSELAGE LINING.

(4) Attach horizontal beam to galley top with six nuts. Tighten nuts.

(5) Tighten galley floor attach nuts and beam attach bolts at fuselage fittings.

FORWARD CARGO RESTRAINT BARRIER NET - MAINTENANCE PRACTICES

1. Install Cargo Barrier Net, Crew Galley Structure, Smoke Barrier

   A. Install Galley Structure

      (1) Remove covers and gain access to barrier net floor fittings.

         NOTE: Barrier net straps 19 through 25 must be installed prior to installing crew galley structure and raised floor.

      (2) Remove panels and covers and gain access to barrier net ceiling and sidewall fittings.

      (3) Remove panels and gain access to crew galley support rod ends stored in ceiling.

      (4) Lay barrier net on airplane floor, positioning the net so fittings on straps 19-25 are adjacent to the floor fittings and balance of net is aft of the fittings.

      (5) Attach straps 19-25 to floor fittings. Ensure that straps 19-25 are laying flat on floor for a distance of approximately 18 inches aft of the floor fittings.

      (6) Remove protective plastic covers from bolt holes and position crew galley structure so the four bolt attach holes in crew galley structure angle are positioned over attach holes in floor plank.

         NOTE: The holes in floor plank are located on LH side of airplane 4 and 14-7/8-inches from airplane centerline. The forward bolt holes are at approximate station 53-3/4.

      (7) Install the four bolts and washers securing crew galley structure angle to the floor.

      (8) Lower the galley structure support rod ends and cable from ceiling.

      (9) Position support rod ends on galley structure to align with rod ends lowered from ceiling. Slide covers back exposing rod ends, engage the two sections, and release covers.

      (10) Connect cable terminal to fitting on galley structure.

   B. Install Cargo Barrier Net

      (1) Raise barrier net by center ring and attach center ring to galley structure.

         (a) Disengage pip-pins securing short sections of cable to galley structure.

(b) Pass cables around barrier net center ring, and returning cables to galley structure, engage pip-pins.

(2) Raise net and attach webbing straps 9 and 10 to the overhead fuselage fittings.

(3) Attach net webbing straps 1 thru 8 and 11 thru 18 to fuselage sidewall and overhead fittings.

(4) Attach all tension strap snap hooks to the fuselage fittings. Adjust tension straps as required.

C. Install Smoke Barrier

(1) Install latches and angles in tiedown tracks at approximate station 60-1/2. Ensure that Velcro tape on angles faces aft.

(2) Attach angles to aft vertical face of raised floor using screws. Ensure that Velcro tape on angles faces aft.

(3) Place smoke barrier on airplane floor and position sidewall to sidewall at approximate station 81.

(4) Starting at overhead left-hand light trough, approximately 25 inches from centerline of airplane, pull back the bottom of flexible plastic trim strip (cover) and engage the section of tape attached to smoke barrier to section of tape in cover. Release the bottom of the cover as sections of tape are mated. Continue until smoke barrier is installed around complete circumference of airplane.

(5) Engage sections of tape on bottom of smoke barrier to sections of tape on angles.

(6) Using webbing straps on forward face of smoke barrier, tie barrier to cargo barrier net so main part of smoke barrier is hanging against net.

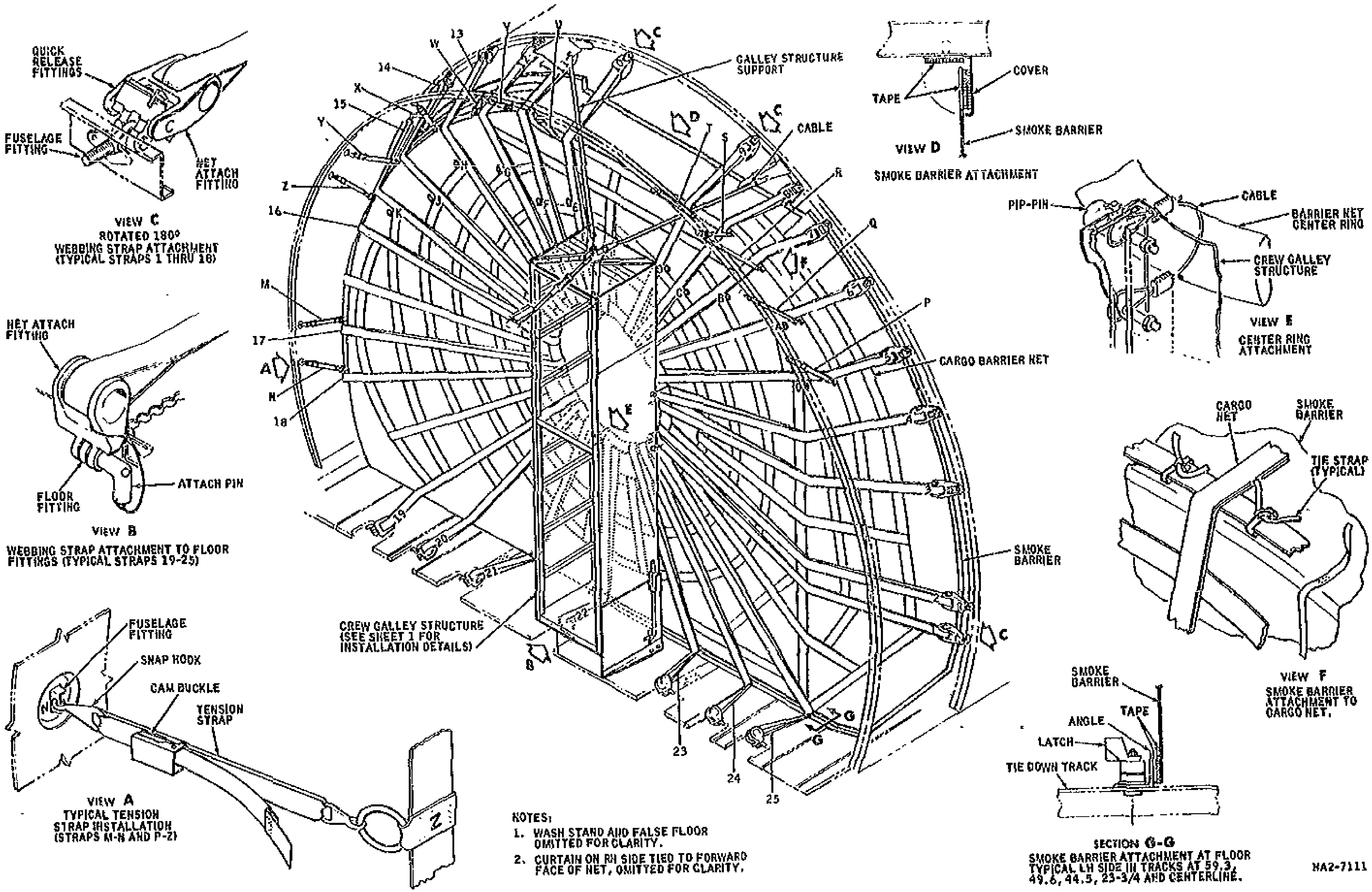
D. Adjust Barrier Net Tension Straps as Required

2. <u>Remove Smoke Barrier, Cargo Barrier Net, Crew Galley Structure</u> (See Figure 201.)

A. Remove Smoke Barrier

(1) Release webbing straps holding smoke barrier to cargo barrier net.

(2) Disengage bottom of smoke barrier from angles in tiedown tracks and on aft vertical face of raised floor.



Forward Cargo Barrier Net and Smoke Barrier Installation
Figure 201

(3) Starting at lower edges of side panel, pull back the bottom of flexible plastic trim strip (cover) and disengage smoke barrier by separating the two sections of tape. Continue until smoke barrier is completely disengaged, then lower smoke barrier onto airplane floor. Move smoke barrier to a position away from barrier net.

(4) Remove smoke barrier latches and angles from tiedown tracks.

(5) Remove angles from aft vertical face of raised floor. Replace screws for future use.

B. Remove Cargo Barrier Net and Crew Galley Structure

(1) Slacken barrier net tension straps.

(2) Disconnect barrier net webbing straps 1 thru 8 and 11 thru 18 from fuselage fittings. Fold straps inward as they are disconnected.

(3) Disconnect tension straps from fittings.

(4) Support weight of net and disconnect straps 9 and 10 from overhead fittings. Lower straps until weight of net is supported by center ring.

(5) While supporting center ring, disengage pip-pins from crew galley structure and remove cables from around center ring.

(6) Lower net onto pallet or airplane floor.

(7) Slide galley structure support rod covers back and disengage rod ends. Release covers.

(7a) Disconnect cable terminal from fitting on crew galley structure.

(8) Disconnect washstand water supply and drain lines at quick disconnects.

(9) Remove the four bolts attaching galley structure angle to floor.

(10) Remove loose items from galley.

(11) Disconnect galley electrical plug.

(12) Remove crew galley structure.

(13) Disengage barrier net straps 19-25 from floor fittings. Fold net and remove.

(14) Raise galley structure support rods and cable into overhead stowage and install covers.

(15) Install protective panels and covers on sidewall and ceiling.

(16) Install covers over net floor fittings.

(17) Install plastic protective covers in bolt holes in floor used for attachment of galley structure angle to floor.

FORWARD CARGO RESTRAINT BARRIER NET - MAINTENANCE PRACTICES

1. Install Cargo Barrier Net, Crew Galley Structure

   A. Install Galley Structure

      (1) Remove covers and gain access to barrier net floor fittings.

         NOTE: Barrier net straps 19 through 25 must be installed prior to installing crew galley structure and raised floor.

      (2) Remove panels and covers and gain access to barrier net ceiling and sidewall fittings.

      (3) Remove panels and gain access to crew galley support rod ends stored in ceiling.

      (4) Lay barrier net on airplane floor, positioning the net so fittings on straps 19-25 are adjacent to the floor fittings and balance of net is aft of the fittings.

      (5) Attach straps 19-25 to floor fittings. Ensure that straps 19-25 are laying flat on floor for a distance of approximately 18 inches aft of the floor fittings.

      (6) Remove protective plastic covers from bolt holes and position crew galley structure so the four bolt attach holes in crew galley structure angle are positioned over attach holes in floor plank.

         NOTE: The holes in floor plank are located on LH side of airplane 4 and 14-7/8-inches from airplane centerline. The forward bolt holes are at approximate station 53-3/4.

      (7) Install the four bolts and washers securing crew galley structure angle to the floor.

      (8) Lower the galley structure support rod ends and cable from ceiling.

      (9) Position support rod ends on galley structure to align with rod ends lowered from ceiling. Slide covers back exposing rod ends, engage the two sections, and release covers.

      (10) Connect cable terminal to fitting on galley structure.

   B. Install Cargo Barrier Net

      (1) Raise barrier net by center ring and attach center ring to galley structure.

         (a) Disengage pip-pins securing short sections of cable to galley structure.

(b) Pass cables around barrier net center ring, and returning cables to galley structure, engage pip-pins.

(2) Raise net and attach webbing straps 9 and 10 to the overhead fuselage fittings.

(3) Attach net webbing straps 1 thru 8 and 11 thru 18 to fuselage sidewall and overhead fittings.

(4) Attach all tension strap snap hooks to the fuselage fittings. Adjust tension straps as required.

C. Adjust Barrier Net Tension Straps as Required

2. Remove Cargo Barrier Net, Crew Galley Structure (See Figure 201.)

A. Remove Cargo Barrier Net and Crew Galley Structure

(1) Slacken barrier net tension straps.

(2) Disconnect barrier net webbing straps 1 thru 8 and 11 thru 18 from fuselage fittings. Fold straps inward as they are disconnected.

(3) Disconnect tension straps from fittings.

(4) Support weight of net and disconnect straps 9 and 10 from overhead fittings. Lower straps until weight of net is supported by center ring.

(5) While supporting center ring, disengage pip-pins from crew galley structure and remove cables from around center ring.

(6) Lower net onto pallet or airplane floor.

(7) Slide galley structure support rod covers back and disengage rod ends. Release covers.

(7a) Disconnect cable terminal from fitting on crew galley structure.

(8) Disconnect washstand water supply and drain lines at quick disconnects.

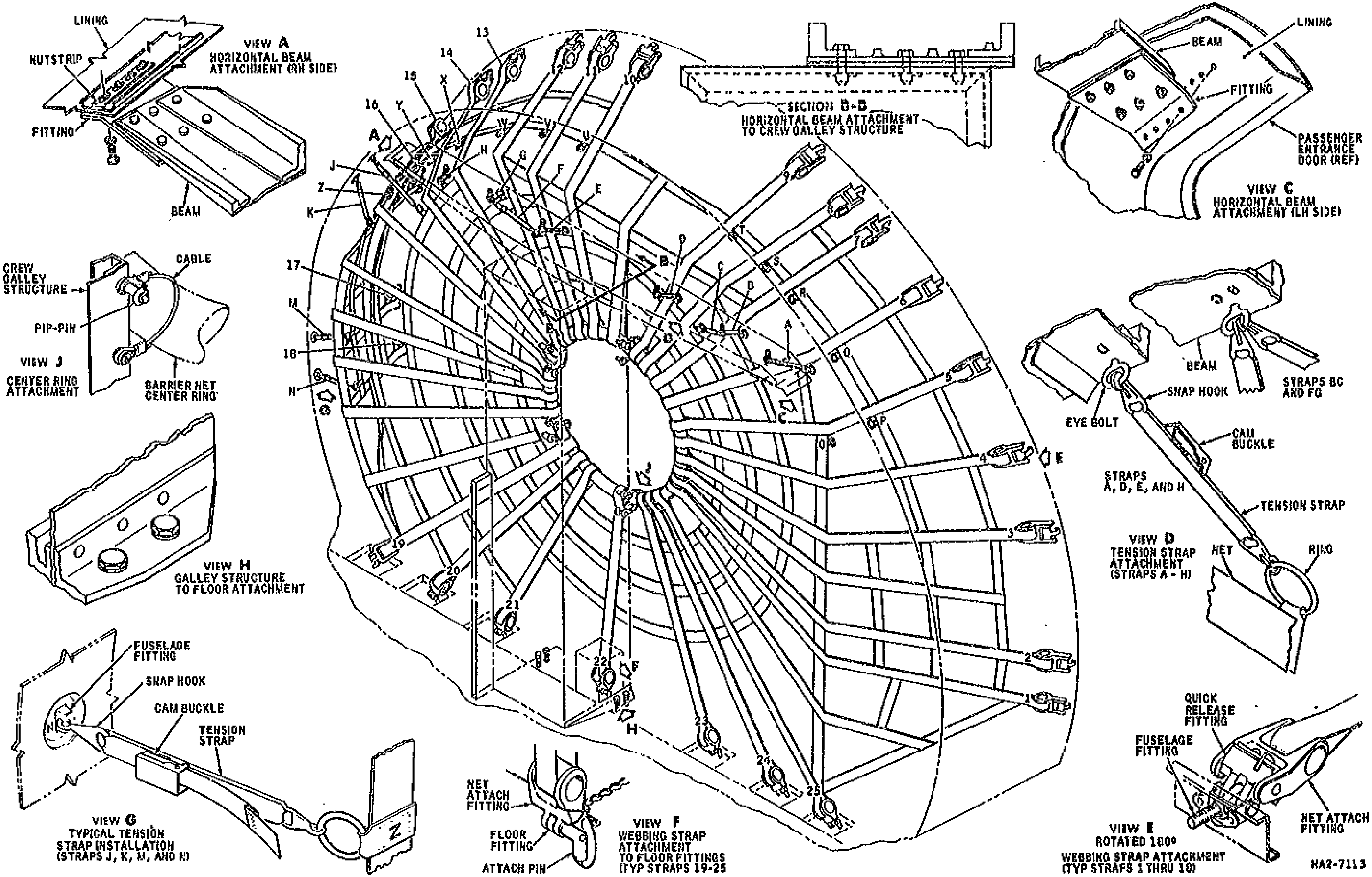
(9) Remove the four bolts attaching galley structure angle to floor.

(10) Remove loose items from galley.

(11) Disconnect galley electrical plug.

(12) Remove crew galley structure.

(13) Disengage barrier net straps 19-25 from floor fittings. Fold net and remove.



Forward Cargo Restraint Barrier Net
Figure 201

(14) Raise galley structure support rods and cable into overhead stowage and install covers.

(15) Install protective panels and covers on sidewall and ceiling.

(16) Install covers over net floor fittings.

(17) Install plastic protective covers in bolt holes in floor used for attachment of galley structure angle to floor.

LOWER CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

A. The forward and aft lower cargo compartments are located below the passenger compartment. The forward compartment extends from the forward passenger compartment bulkhead to the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft accessory compartment. The cargo compartments are lined with laminated fiberglas panels that are removable in sections to facilitate inspection and repair. Equipment in the compartment includes cargo container floor tracks, cargo containers, cargo nets, cargo container hoists, traverse moving equipment, and provisions for transporting live animals.

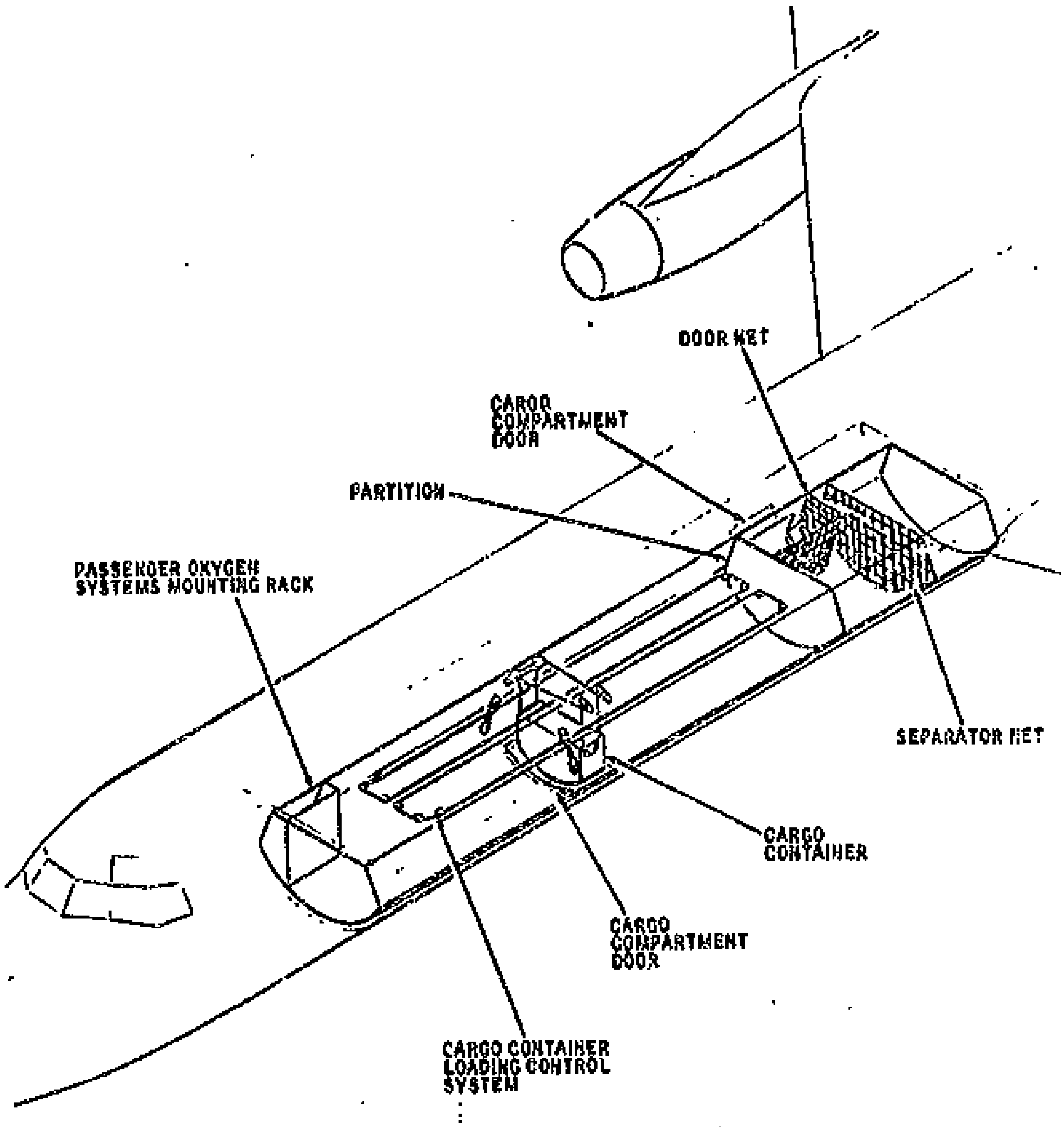
B. The cargo compartments are equipped for cargo container loading. The cargo containers are preloaded at the airport terminal and placed aboard the airplane with electric hoists installed in the cargo compartment. The hoists are controlled by switches located in the fuselage, just forward of the cargo compartment door. Each container has a capacity of 1100 pounds of cargo. A total of 22 containers is used, 11 in the forward compartment and 11 in the aft compartment. Two handcranked cable systems are used to move the containers into position on the cargo floor tracks in the cargo compartment.

C. Cargo nets consist of a removable partition net installed at each door in the forward and aft cargo compartments, to prevent cargo from blocking the door openings. Removable cargo separator nets are installed across the forward and aft cargo compartments. The net for the forward cargo compartment extends from sidewall to sidewall; the net for the aft compartment extends from sidewall to sidewall, and is interchangeable with the animal compartment net.

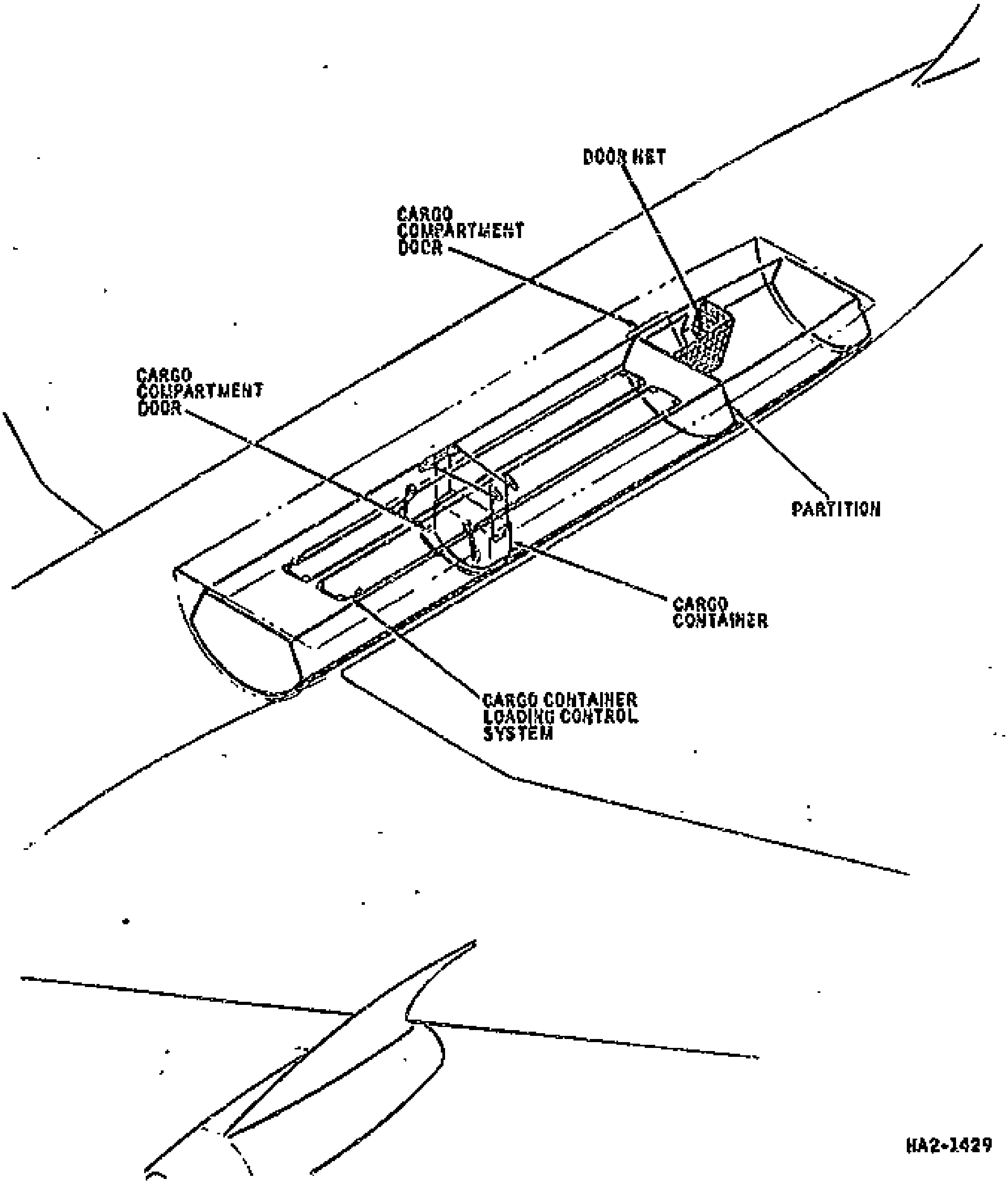
D. The aft sections of the forward and aft cargo compartments are suitable for storage of bulk cargo loads, and the aft section of the forward compartment is suitable for transportation of live animals. A webgate net of the quick removable type is installed to protect the animal compartment area from shifting cargo.

E. A lower cargo compartment viewer is provided to permit inspection of the lower compartments when the viewer is inserted through access openings in the floor structure. Three viewer openings are installed, one for each lower cargo compartment, and one for the accessory compartment forward of the front spar.

F. Each compartment is equipped with two doors, a side door located on the right side and near the aft end of the compartment, and a lower door located on the underside of the airplane and near the center of the compartment. The lower door is used for loading cargo containers, and the side door is used for loading luggage, bulk goods, and animals.

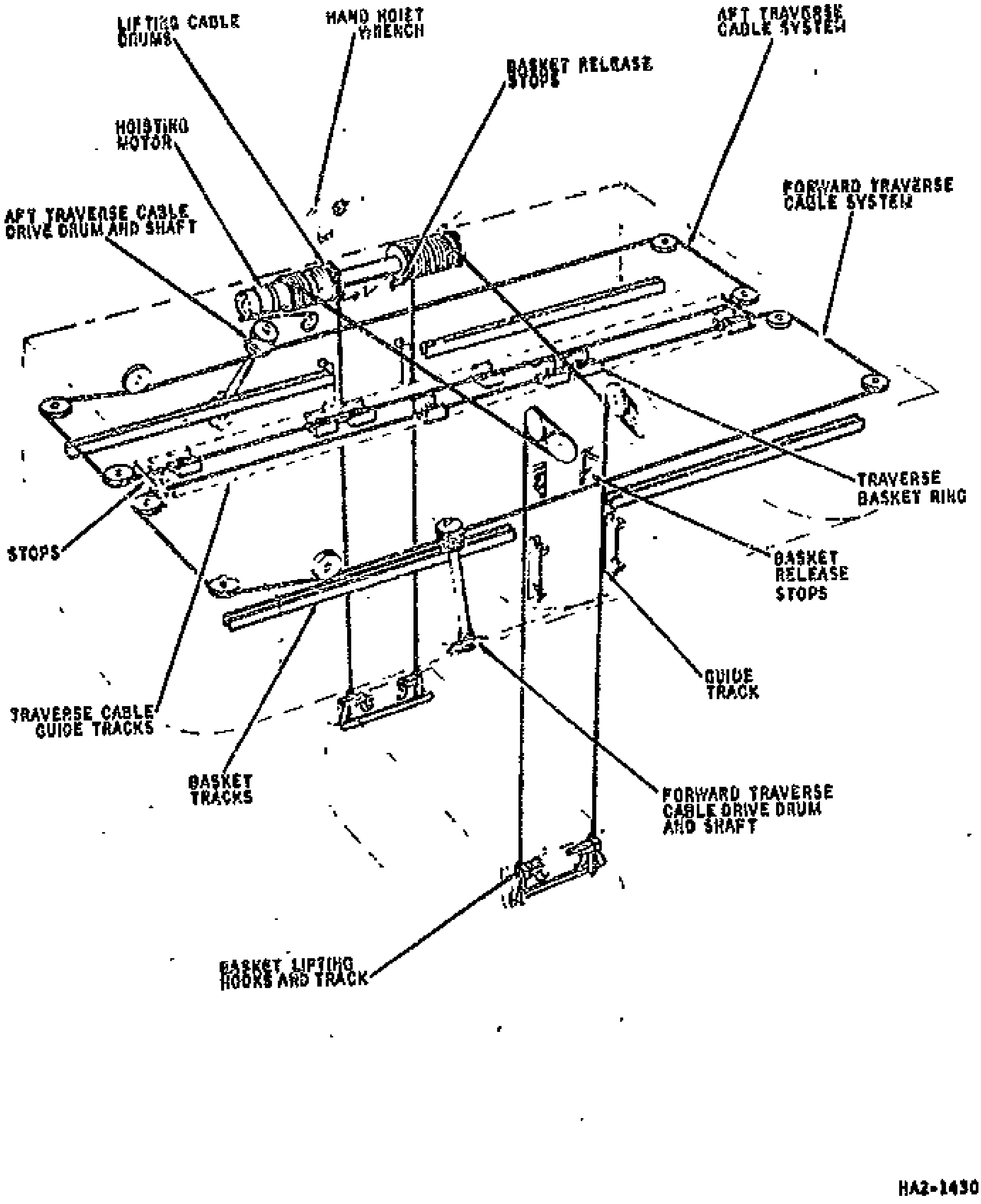


Forward Lower Cargo Compartment
Figure 1



Aft Lower Cargo Compartment
Figure 2

Printed in U.S.A.



Cargo Container Loading Control System
Figure 3

Printed in U.S.A.

LOWER CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

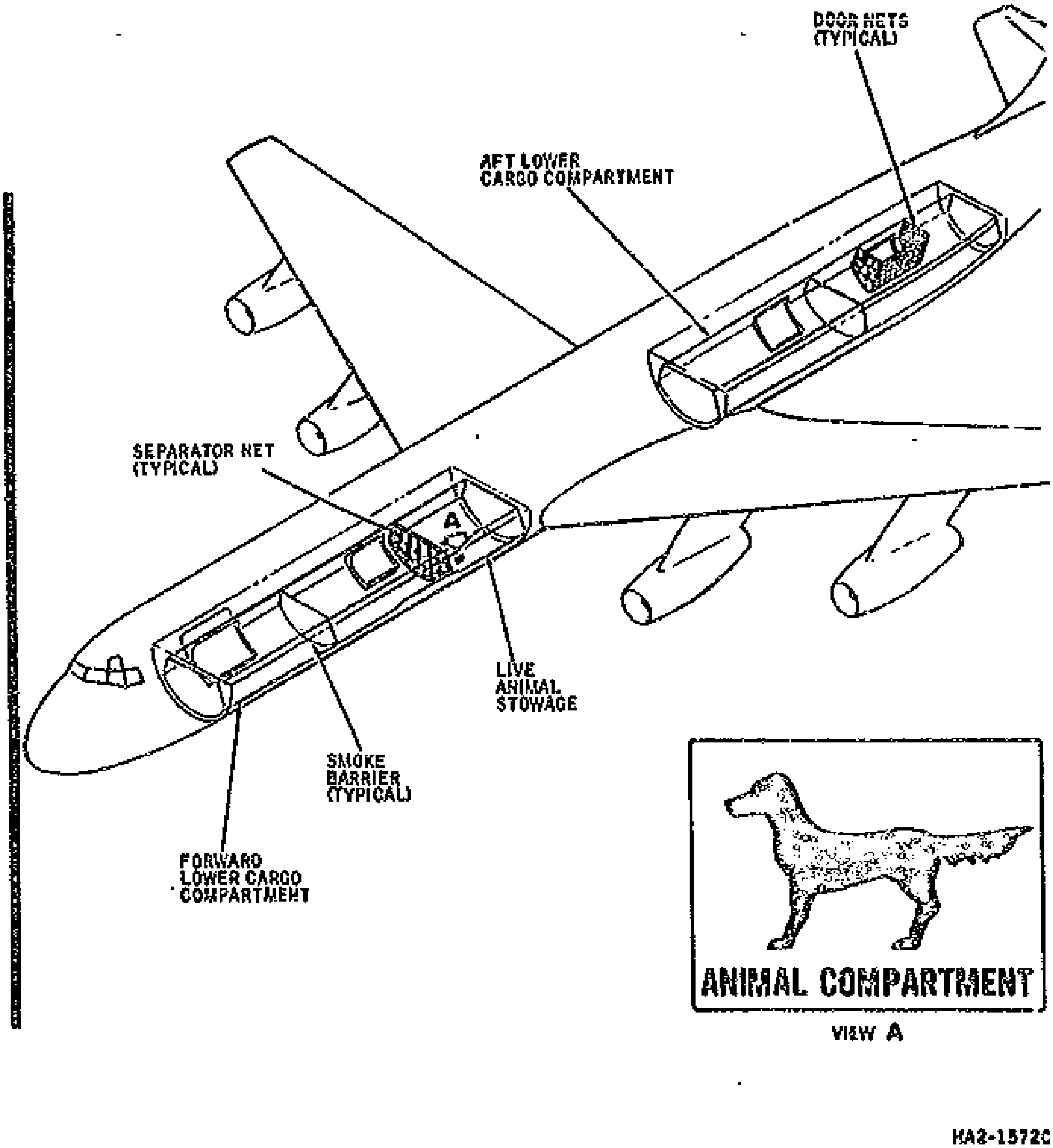
A. The forward and aft lower cargo compartments are located below the passenger compartment. The forward compartment extends from the forward passenger compartment bulkhead to the accessory compartment forward of the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft accessory compartment. The cargo compartments are lined with laminated fiberglas panels that are removable in sections to facilitate inspection and repair. Equipment in the compartment includes cargo nets, tiedown provisions, and provisions for transporting live animals. Each compartment is equipped with (one large and one small) doors for the side-loading of bulk cargo, luggage, and animals.

B. Cargo nets consist of a removable partition net or nylon panel barrier, as applicable, installed at each door in the forward and aft cargo compartments, to prevent cargo from blocking the door openings. A removable partition is installed across the forward and aft cargo compartments to confine fire or smoke to a small area.

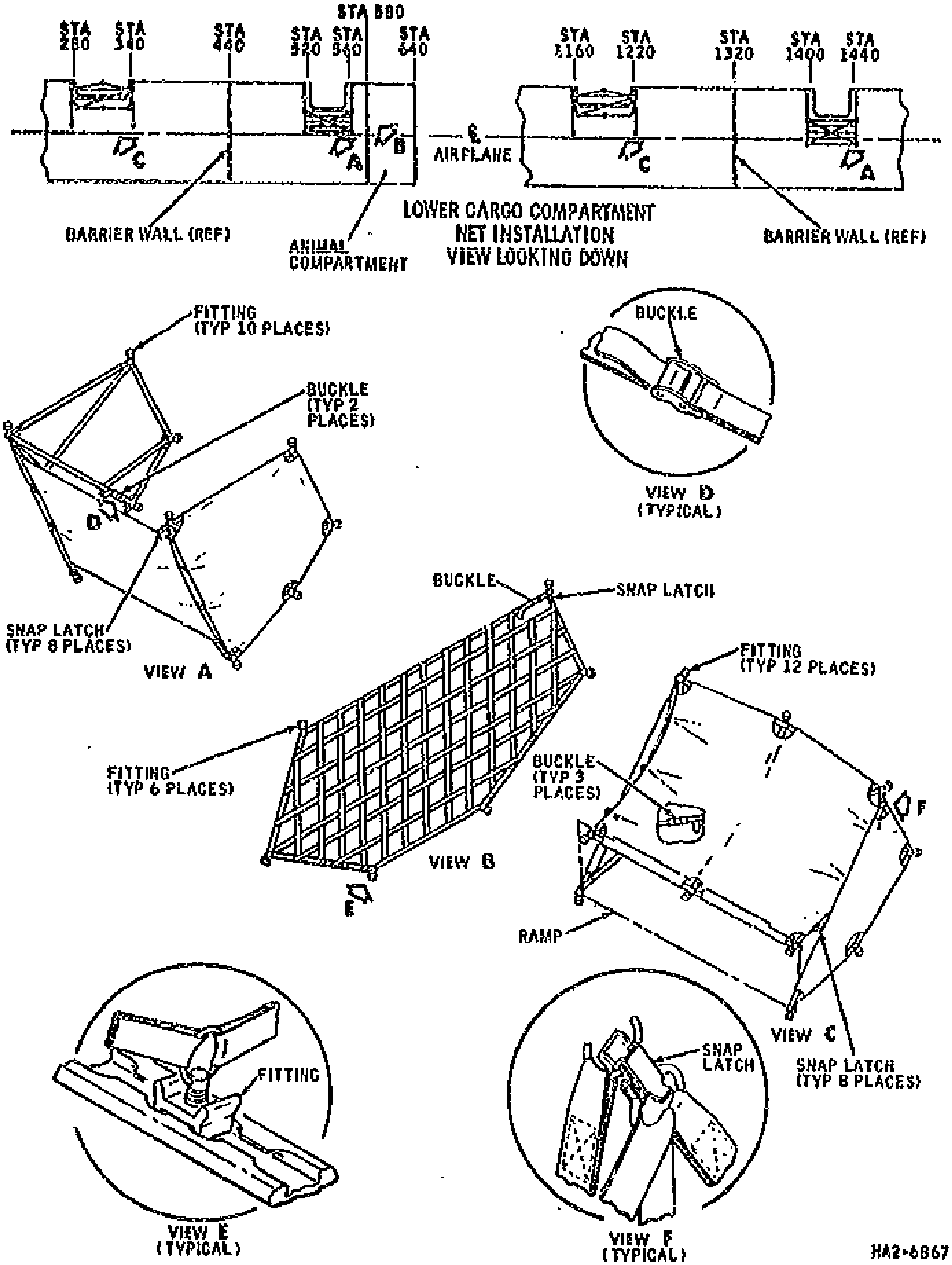
C. A smoke barrier or partition is installed in each lower cargo compartment between the doors to divide each compartment into two airtight bays. Access for the removal of the barrier is through the small door to each compartment. The center panel of the barrier is removable from either side (fore or aft) to provide access to the other bay.

D. The animal compartment is the area from the aft cargo loading door to the aft wall of the forward lower cargo compartment. This area is separated from the forward area of the cargo compartment by a webgate net or barrier spanning the width of the compartment to prevent bulk cargo from sliding into the animal area.

E. Heat is supplied to the forward lower cargo compartment from two sources. One source is air exhausted from the radio rack by the radio rack blower, the other source is bleed air from the low pressure pneumatic system. The radio rack blower is controlled by the forward lower cargo and animal compartment temperature control switch. The blower will come on when the temperature drops to 18.3°C (65°F) and remains in operation until the temperature reaches 23.9°C (75°F). The animal portion of the forward lower cargo compartment (aft of the aft cargo loading door) receives additional heat from the low pressure pneumatic system. The pneumatic bleed valve will open when the temperature drops to 15.6°C (60°F) and will remain open until the temperature reaches 21.1°C (70°F).



Forward and Aft Lower Cargo Compartments
Figure 1



Lower Cargo Compartment Door Barrier
Figure 2

CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

A. The passenger configuration of the airplane has two lower cargo compartments, one forward and one aft. The passenger/cargo and all-cargo configurations have three cargo compartments, one forward, one aft, and one upper. All cargo compartments are within the pressurized area of the fuselage. The forward lower compartment occupies the area of the fuselage below the floor between the forward electronics compartment and the main landing gear wheel wells while the aft lower compartment is between the main landing gear wheel wells and the aft pressure bulkhead in the DC-8/8F-50. In the DC-8-60 the forward lower compartment extends from the forward passenger cabin bulkhead to the accessory compartment forward of the main landing gear wheel wells and the aft lower compartment extends from the main landing gear wheel wells to the aft accessory compartment. The upper cargo compartment extends from the passenger compartment forward bulkhead to the passenger/cargo divider partition or to the aft lavatories above the floor.

B. Equipment in the compartments includes cargo nets, tiedown provisions, smoke barrier partition, barrier nets, door nets, provisions for the transportation of live animals, and cargo loading systems. The cargo nets consist of a removable net installed at each door in the lower cargo compartments to prevent cargo from blocking the door openings; separator nets installed in the lower compartments to divide the compartments into two bays and to restrain bulk cargo from shifting; a nine-G restraint barrier net in the upper compartment to prevent shifting of cargo; and side restraint nets for securing loaded pallets in the upper compartment. The restraint barrier consists of a vertical post, a horizontal beam and a web net. Attachment of the barrier net is to the floor tracks and to special sidewall, ceiling, and crew galley attach fittings.

In the passenger/cargo configuration a removable divider partition is installed to separate cargo from passengers (see 25-24-0). The cargo loading systems consist of ball caster conveyor sections and longitudinal roller assemblies. Cargo loads are secured on pallets by end and side restraint fittings, side rub rails, and side restraint nets. A removable partition is installed across the lower cargo compartments in the DC-8-60 to confine fire or smoke to a small area. The partition is installed between the cargo loading doors to divide each compartment into two airtight bays. Removal or installation of the partition can be accomplished through the aft bay of each compartment. Access to the partition is through the small door to each compartment. The center panel of the barrier is removable from either side (fore or aft) to provide access to the other bay.

C. The lower cargo compartments are lined with aluminum sheeting and/or fiberglas panels that are removable in sections to facilitate inspection and repair. Insulating material is installed between the compartment walls and the airplane skin. The insulation consists of fiberglas batts enclosed in coated nylon material. The insulation serves both as a thermal and acoustical insulator. In addition, warm air, circulated in the areas surrounding the compartments, supplies heat for the compartments.

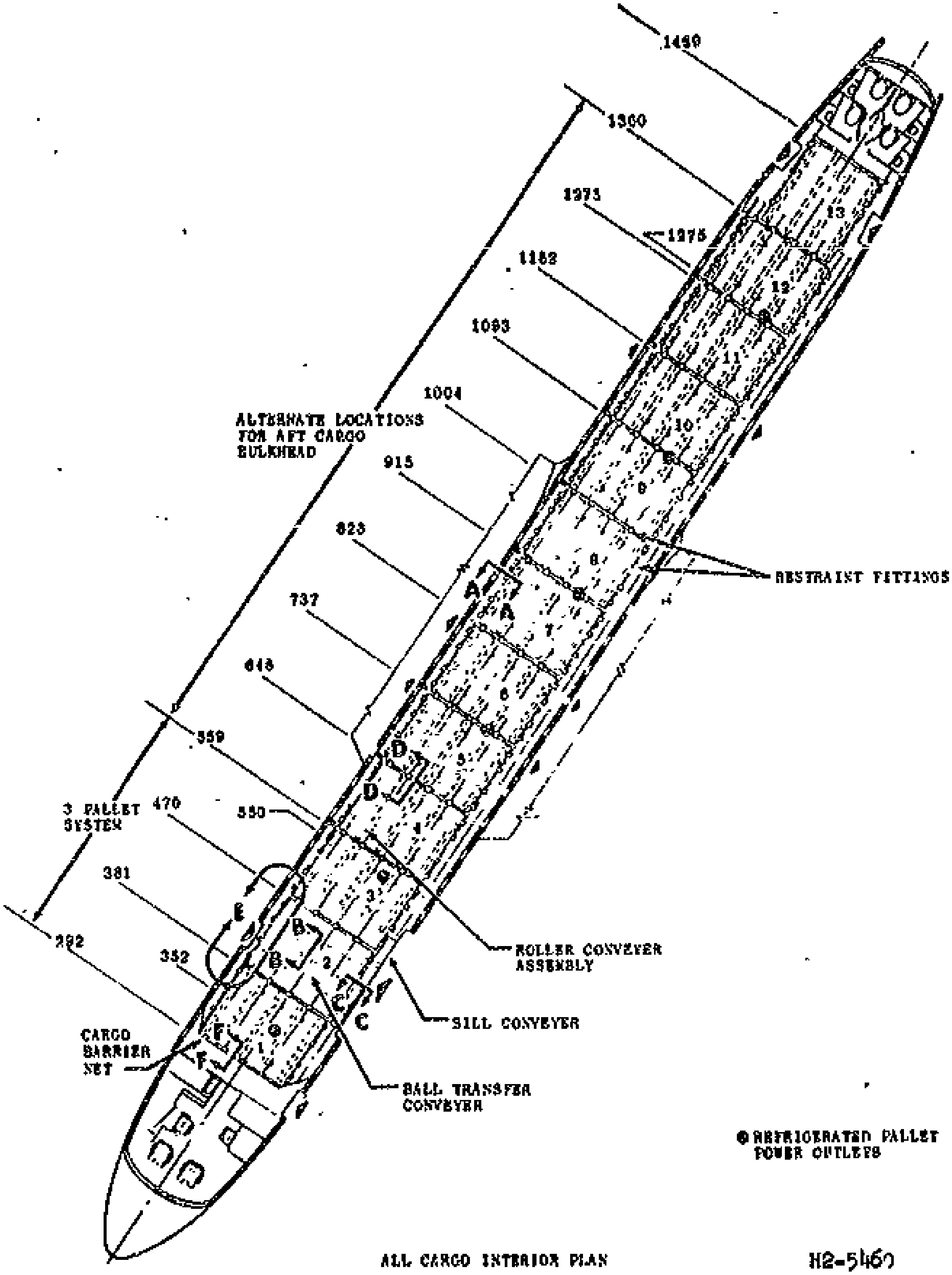
D. In the DC-8F-50 the upper cargo compartment will accommodate up to thirteen lightweight pallets with nominal dimensions of 88 to 108 inches. The upper cargo compartment in the DC-8-60 will accommodate up to eighteen lightweight pallets of the same dimensions. The cargo loading system consists of ball castor conveyor sections and longitudinal roller assemblies. Loads are secured by end and side restraint fittings.

E. When operating under bulk cargo loading conditions, nets are installed to restrain the cargo. They are located along the left side of the main cargo compartment approximately 48 inches from the cabin centerline, leaving a 21 inch access aisle. The nets are supported by posts every 89 inches. The upper ends of the stanchions fit the fuselage frames at the folding stowage rack struts. The lower ends of the posts fit into the recesses in the floor tiedown track. Horizontal posts attach between the posts midway up from the floor and at the top to support the nets.

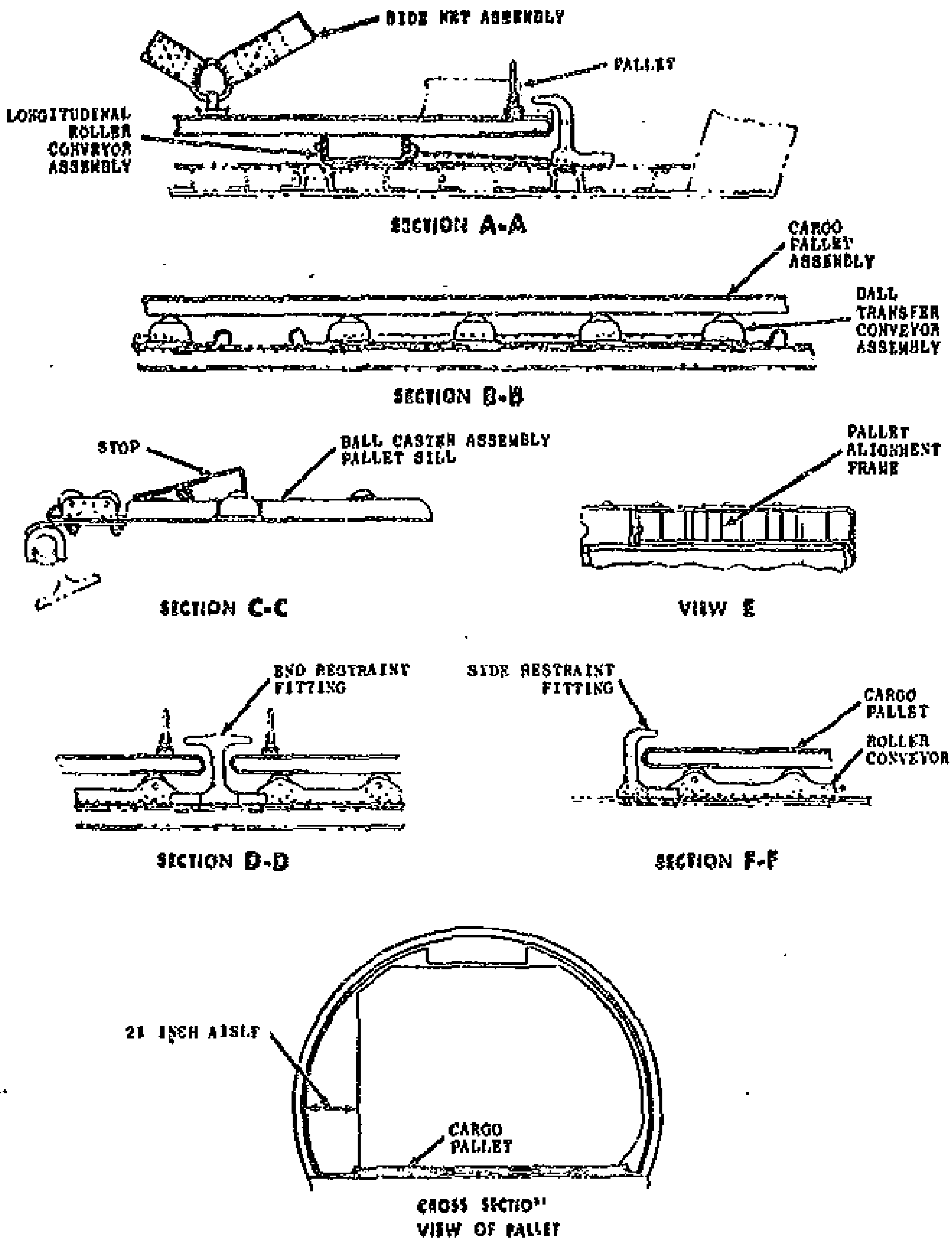
F. Upper and lower cargo rub rails are installed on both sides of the compartment. The upper rail is a part of the stowage rack hinge attach fittings. The lower rails are installed on the conditioned air plenum near the floor. Attachment holes are incorporated in the cargo rub rails for alternate positions of the divider partition.

G. The aft portion of the forward lower cargo compartment may be used for the transportation of live animals. A quick removable type web gate is installed at station 580 for protection from shifting cargo.

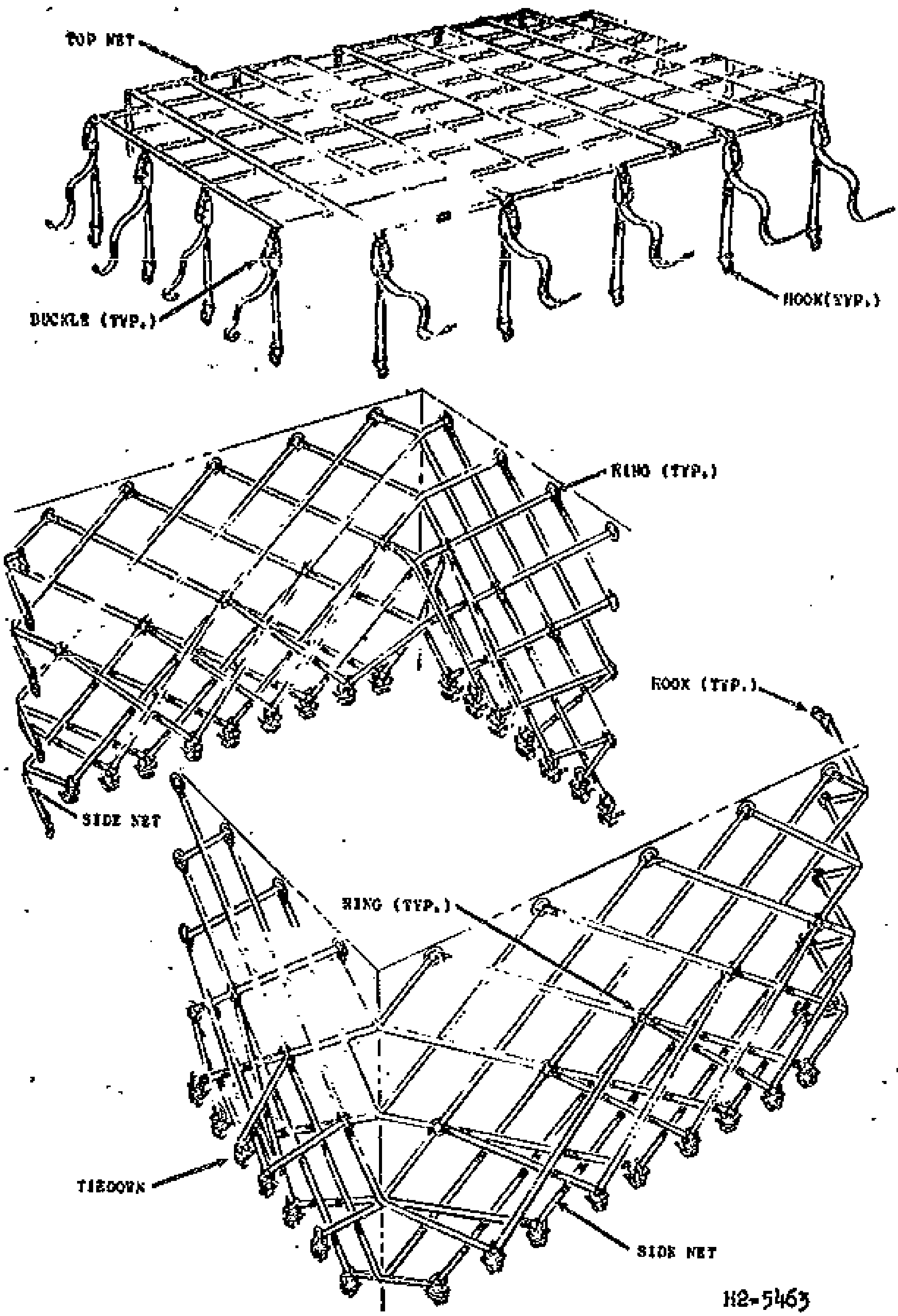
H. The heating of the forward lower cargo compartment floor is by discharged air from the radio rack cooling system. The heating of the aft lower cargo compartment floor is by discharge air from the main cabin. Heated air is diffused under the floor of the lower cargo compartment by a blower installed in the left hand cargo compartment tunnel. Heating is sufficient to prevent freezing of the cargo and to maintain a minimum temperature of 60 degrees in the animal portion of the forward lower cargo compartment.



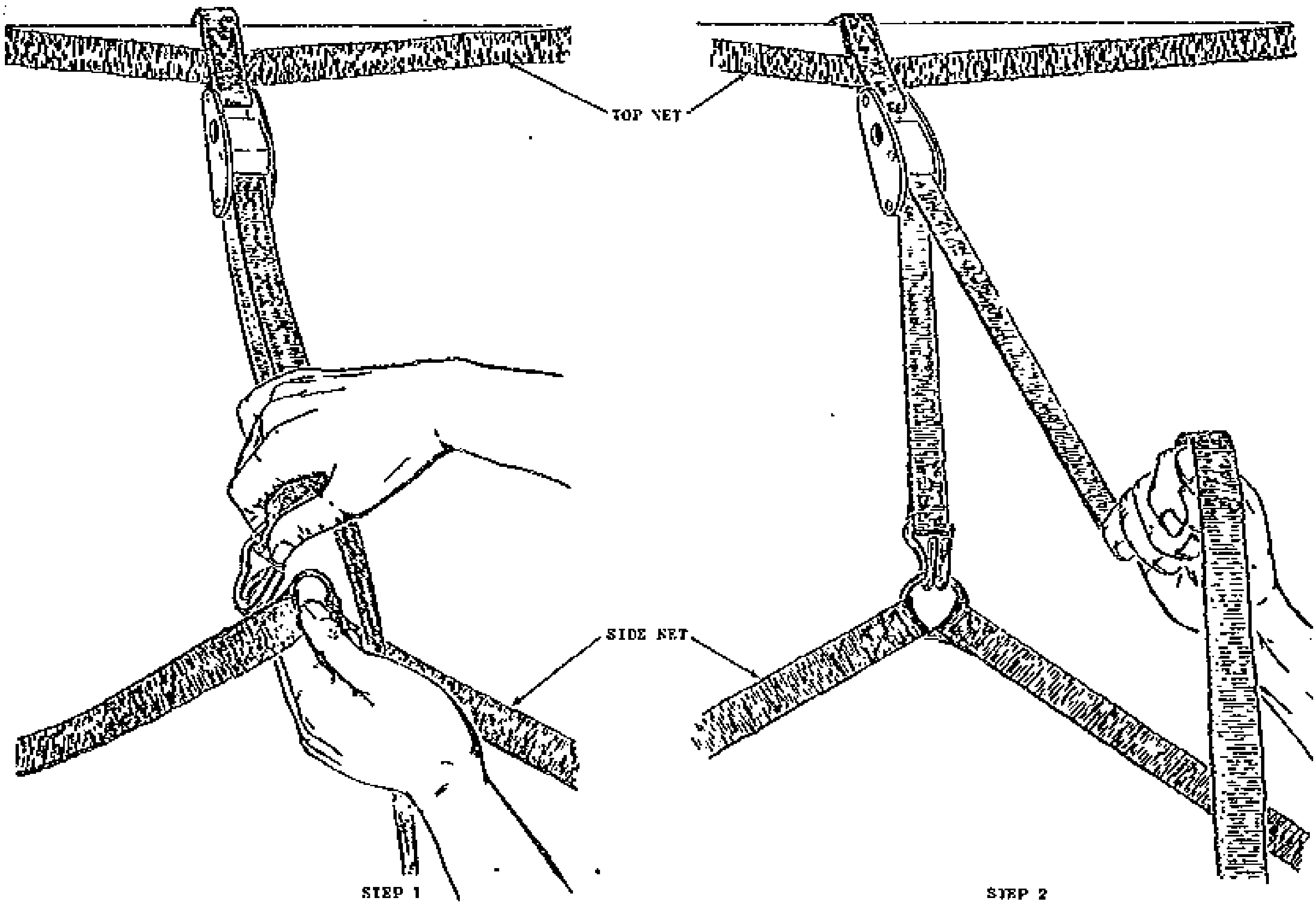
Interior Plan (Typical) -- (DC-8F-50 All Cargo)
Figure 1



Cargo Pallet Details -- (DC-8F-50)
Figure 2



Pallet Cargo Nets -- (DC-8F-50)
Figure 3 (Sheet 1)



Pallet, Cargo Nets -- (DC-8F-50)
Figure 3 (Sheet 2)

LOWER CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

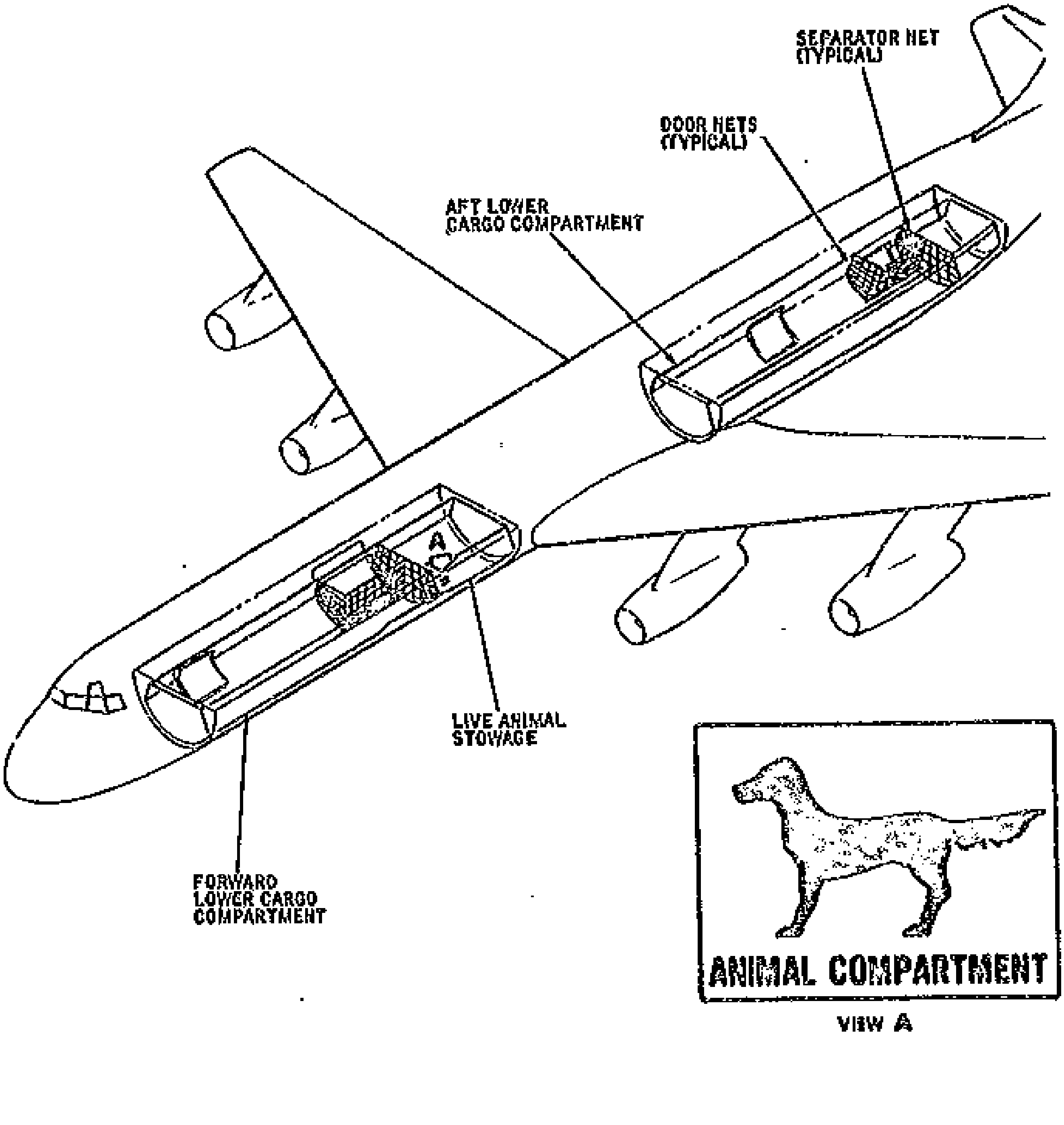
A. The forward and aft lower cargo compartments are located below the passenger compartment. The forward compartment extends from the forward passenger compartment bulkhead to the accessory compartment forward of the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft accessory compartment. The cargo compartments are lined with laminated fiberglas panels that are removable in sections to facilitate inspection and repair. Equipment in the compartment includes cargo nets, tiedown provisions, and provisions for transporting live animals. Each compartment is equipped with (one large and one small) doors for the side-loading of bulk cargo, luggage, and animals.

B. Cargo nets consist of a removable partition net, or nylon panel barrier, as applicable installed at each door in the forward and aft compartments, to prevent cargo from blocking the door openings. A removable partition is installed across the forward and aft cargo compartments to confine fire or smoke to a small area.

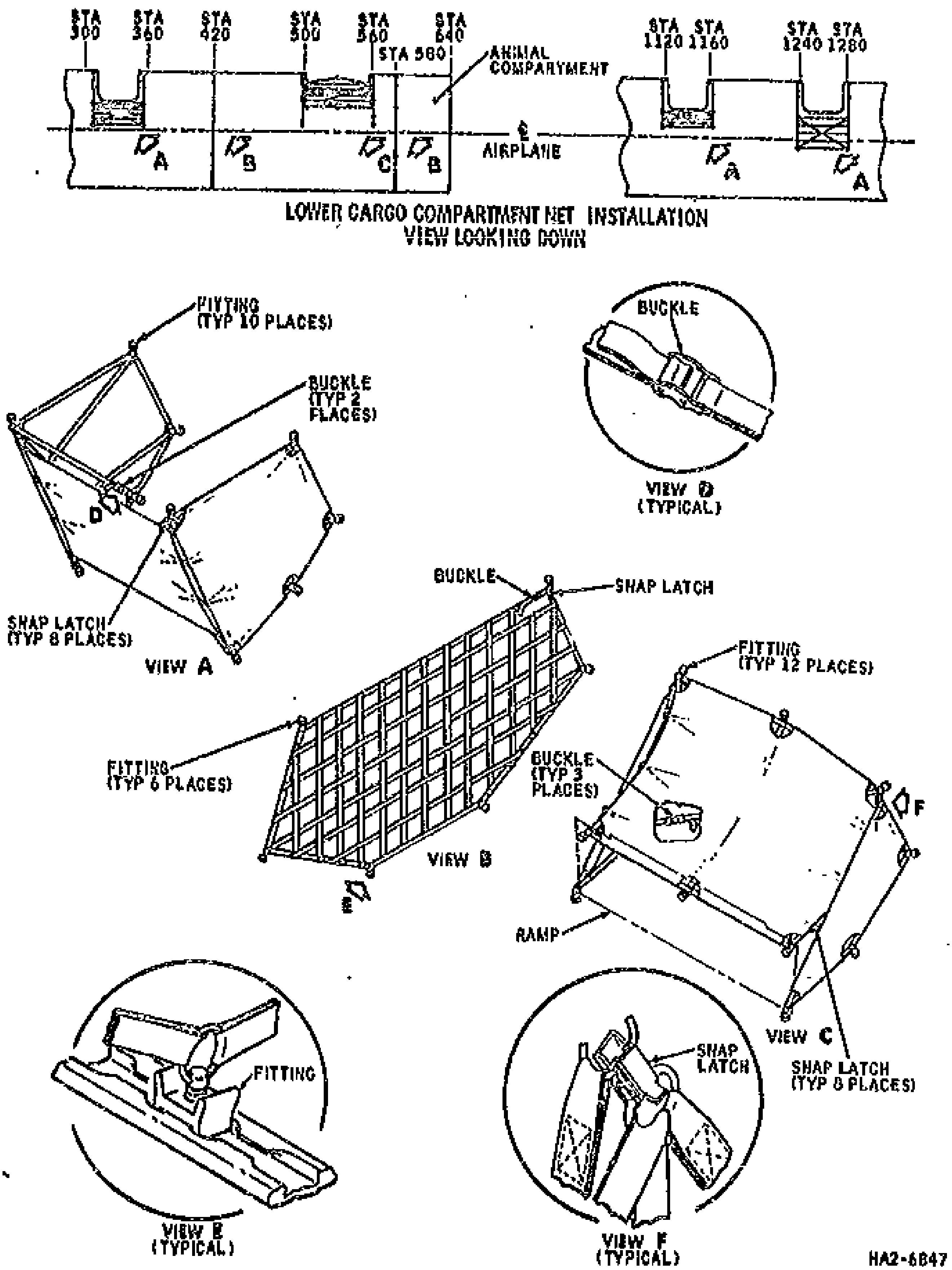
C. A smoke barrier or partition is installed in each lower cargo compartment between the doors to divide each compartment into two airtight bays. Access for the removal of the barrier is through the small door to each compartment. The center panel of the barrier is removable from either side (fore or aft) to provide access to the other bay.

D. The animal compartment is the area from the aft cargo loading door to the aft wall of the forward lower cargo compartment. This area is separated from the forward area of the cargo compartment by a webgate net or barrier spanning the width of the compartment to prevent bulk cargo from sliding into the animal area.

E. Heat is supplied to the forward lower cargo compartment from two sources. One source is air exhausted from the radio rack by the radio rack blower, the other source is bleed air from the low pressure pneumatic system. The radio rack blower is controlled by the forward lower cargo and animal compartment temperature control switch. The blower will come on when the temperature drops to 18.3°C (65°F) and remains in operation until the temperature reaches 23.9°C (75°F). The animal portion of the forward lower cargo compartment (aft of the aft cargo loading door) receives additional heat from the low pressure pneumatic system. The pneumatic bleed valve will open when the temperature drops to 15.6°C (60°F) and will remain open until the temperature reaches 21.1°C (70°F).



Forward and Aft Lower Cargo Compartments
Figure 1



HA2-6847

Lower Cargo Compartment Door Barrier
Figure 2

LOWER CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

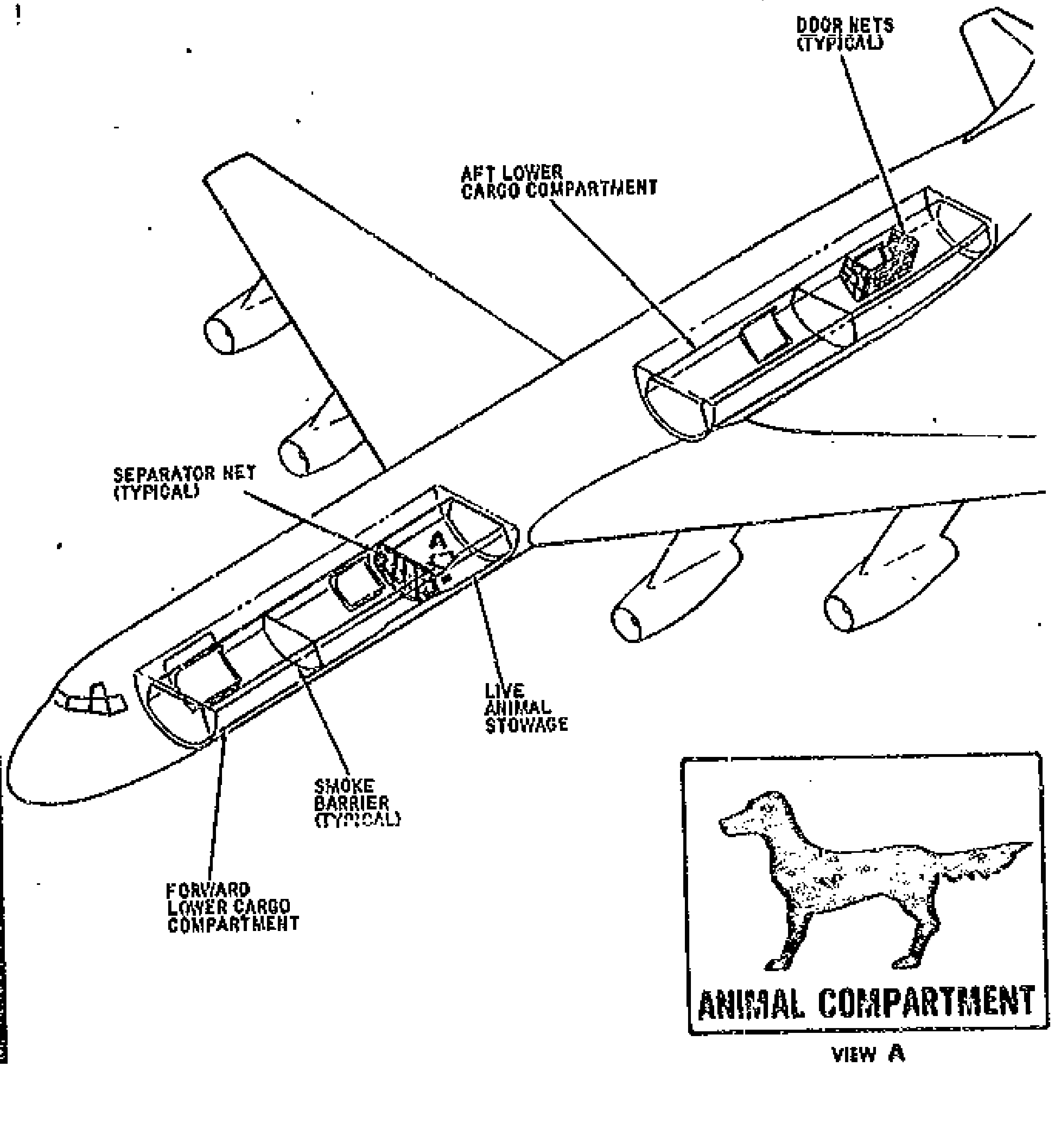
A. The forward and aft lower cargo compartments are located below the passenger compartment. The forward compartment extends from the forward passenger compartment bulkhead to the accessory compartment forward of the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft accessory compartment. The cargo compartments are lined with laminated fiberglas panels that are removable in sections to facilitate inspection and repair. Equipment in the compartment includes cargo nets, tiedown provisions, and provisions for transporting live animals. Each compartment is equipped with (one large and one small) doors for the side-loading of bulk cargo, luggage, and animals. The cargo compartment flooring incorporat[illegible] ball transfer panels and roller conveyers to facilitate loading of cargo containers. Sidewall rails are installed to guide the cargo containers and to prevent damage to the compartment sidewalls. Restraint fittings are installed to prevent shifting of the containers. The forward cargo compartment will accommodate ten containers and the aft cargo compartment will accommodate nine containers.

B. Cargo nets consist of a removable partition net installed at each door in the forward and aft cargo compartments, to prevent cargo from blocking the door openings. A removable partition is installed across the forward and aft cargo compartments to confine fire or smoke to a small area.

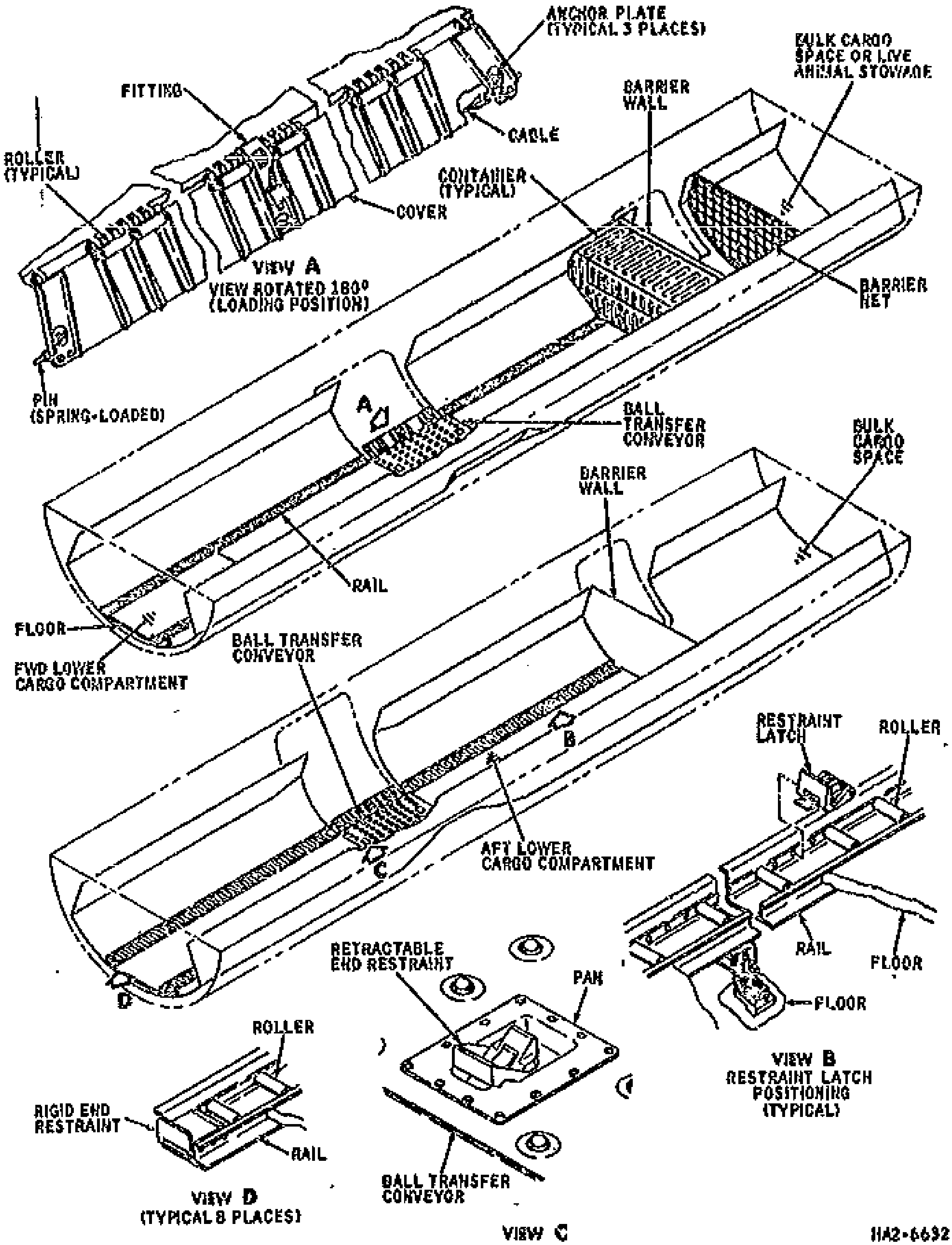
C. A smoke barrier or partition is installed in each lower cargo compartment between the doors to divide each compartment into two airtight bays. Access for the removal of the barrier is through the small door to each compartment. The center panel of the barrier is removable from either side (fore or aft) to provide access to the other bay.

D. The animal compartment is the area from the aft cargo loading door to the aft wall of the forward lower cargo compartment. This area is separated from the forward area of the cargo compartment by a webgate net or barrier spanning the width of the compartment, to prevent bulk cargo from sliding into the animal area.

E. Heat is supplied to the forward lower cargo compartment from two sources. One source is air exhausted from the radio rack by the radio rack blower, the other source is bleed air from the low pressure pneumatic system. The radio rack blower is controlled by the forward lower cargo and animal compartment temperature control switch. The blower will come on when the temperature drops to 18.3°C (65°F) and remains in operation until the temperature reaches 23.9°C (75°F). The animal portion of the forward lower cargo compartment (aft of the aft cargo loading door) receives additional heat from the low pressure pneumatic system. The pneumatic bleed valve will open when the temperature drops to 15.6°C (60°F) and will remain open until the temperature reaches 21.1°C (70°F).

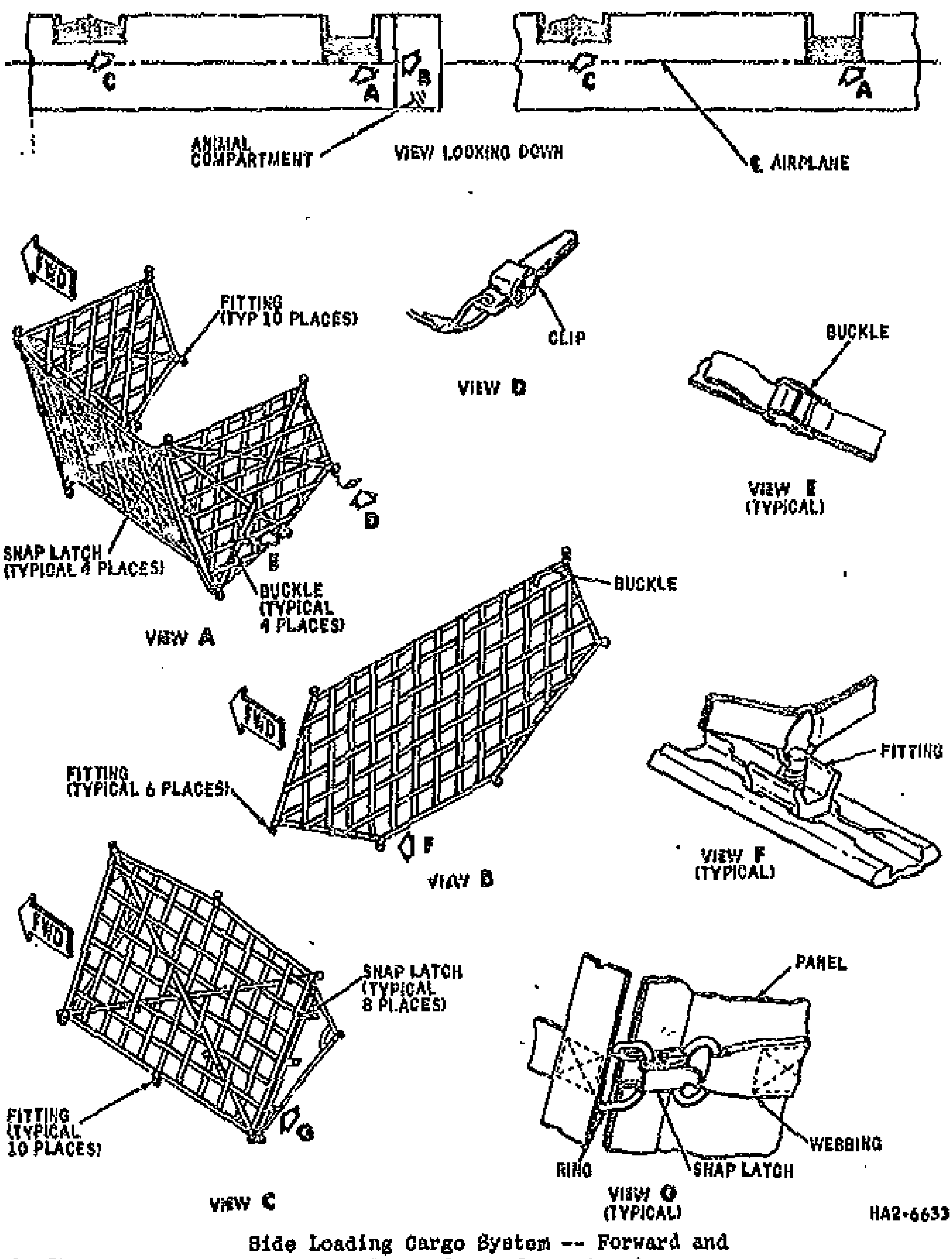


Forward and Aft Lower Cargo Compartments
Figure 1



HA2-6632

Side Loading Cargo System -- Forward and
Aft Lower Cargo Compartments
Figure 2 (Sheet 1)



Side Loading Cargo System -- Forward and
Aft Lower Cargo Compartment
Figure 2 (Sheet 2)

LOWER CARGO COMPARTMENTS - DESCRIPTION AND OPERATION

1. Description

A. The forward and aft lower cargo compartments are located below the passenger compartment. The forward compartment extends from the forward passenger compartment bulkhead to the accessory compartment forward of the main landing gear wheel wells. The aft compartment extends from the main landing gear wheel wells to the aft accessory compartment. The cargo compartments are lined with laminated fiberglas panels that are removable in sections to facilitate inspection and repair. Equipment in the compartment includes cargo nets, tiedown provisions, and provisions for transporting live animals. Each compartment is equipped with (one large and one small) doors for the side-loading of bulk cargo, luggage, and animals. A cover on the cargo floor folds over the opening in the floor at the doorjamb to provide a smooth surface for loading and unloading cargo and a protection for the cargo door. Handles are installed at each latch which are used to rotate cover in the up position.

B. On airplanes with SB 25-160 incorporated, the cargo compartment flooring incorporates ball transfer panels and roller conveyors to facilitate loading of cargo containers. Sidewall rails are installed to guide the cargo containers and to prevent damage to the compartment sidewalls. Restraint fittings are installed to prevent shifting of the containers. The forward cargo compartment will accommodate ten containers and the aft cargo compartment will accommodate nine containers.

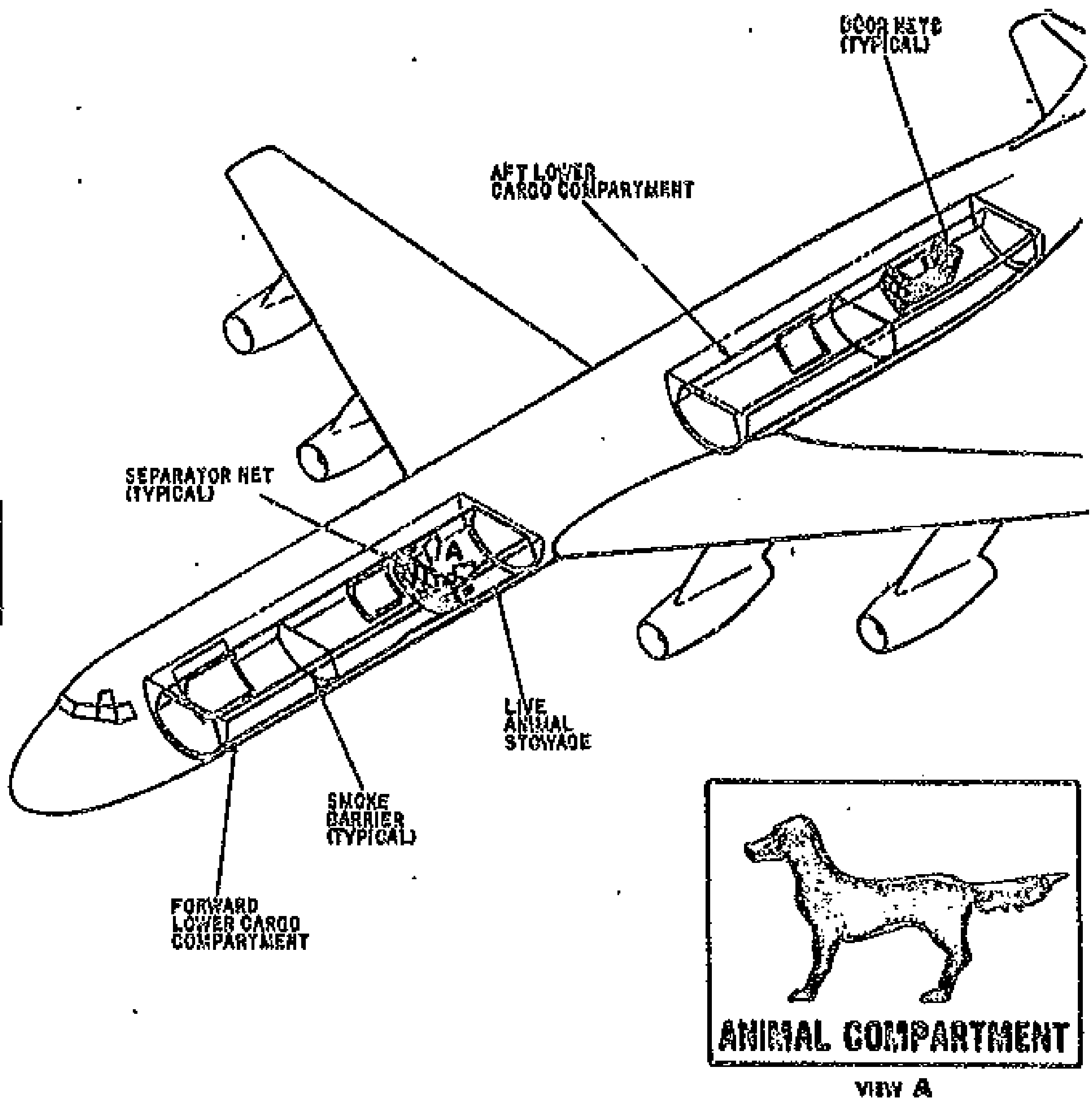
C. Cargo nets consist of a removable partition net installed at each door in the forward and aft cargo compartments, to prevent cargo from blocking the door openings. A removable partition is installed across the forward and aft cargo compartments to confine fire or smoke to a small area.

D. A smoke barrier or partition is installed in each lower cargo compartment between the doors to divide each compartment into two airtight bays. Access for the removal of the barrier is through the small door to each compartment. The center panel of the barrier is removable from either side (fore or aft) to provide access to the other bay.

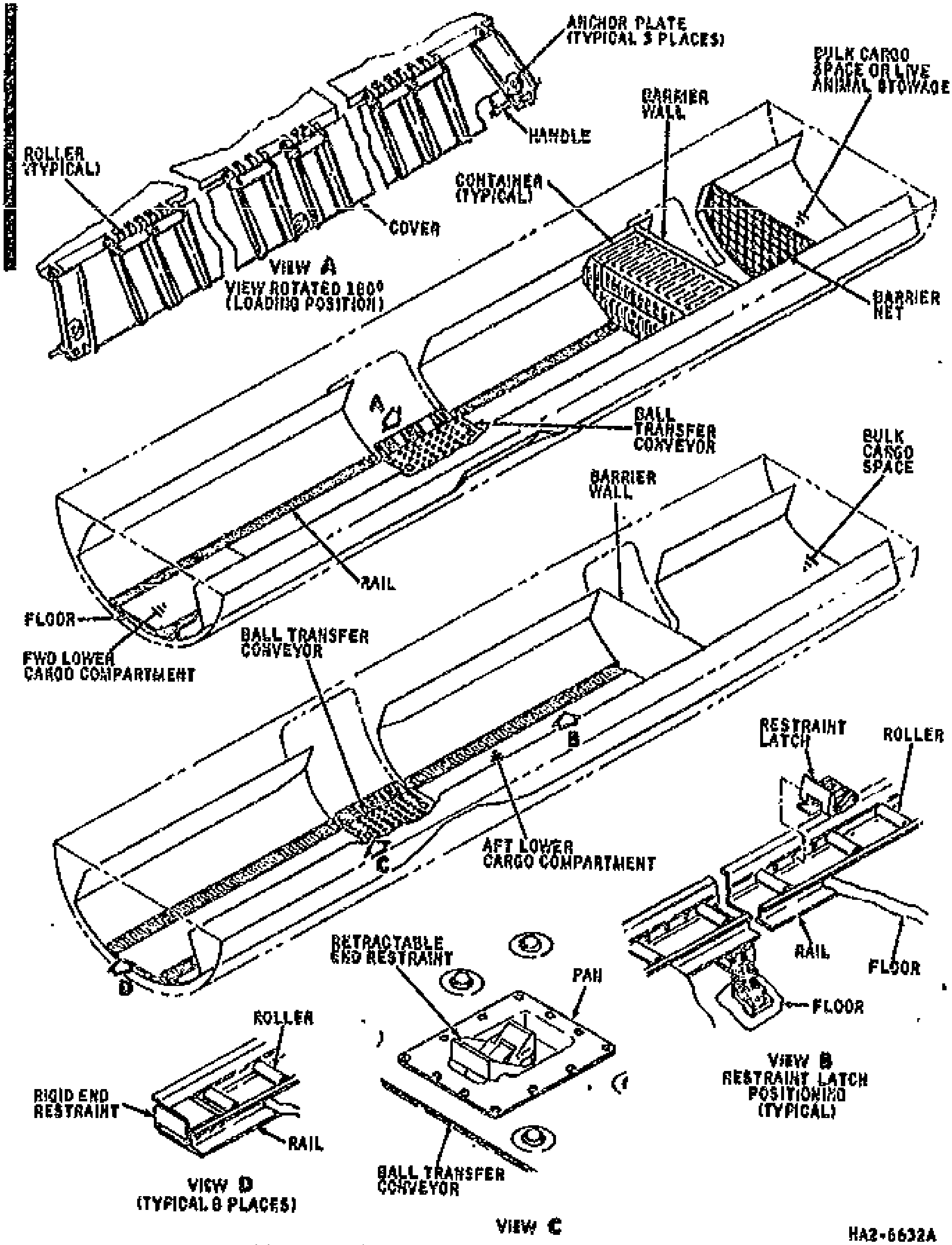
E. The animal compartment is the area from the aft cargo loading door to the aft wall of the forward lower cargo compartment. This area is separated from the forward area of the cargo compartment by a webgate net or barrier spanning the width of the compartment, to prevent bulk cargo from sliding into the animal area.

F. Heat is supplied to the forward lower cargo compartment from two sources. One source is air exhausted from the radio rack by the radio rack blower, the other source is bleed air from the low pressure pneumatic system. The radio rack blower is controlled by the forward lower cargo and animal compartment temperature control switch. The blower will come on when the temperature drops to 18.3°C (65°F) and remains in operation until the

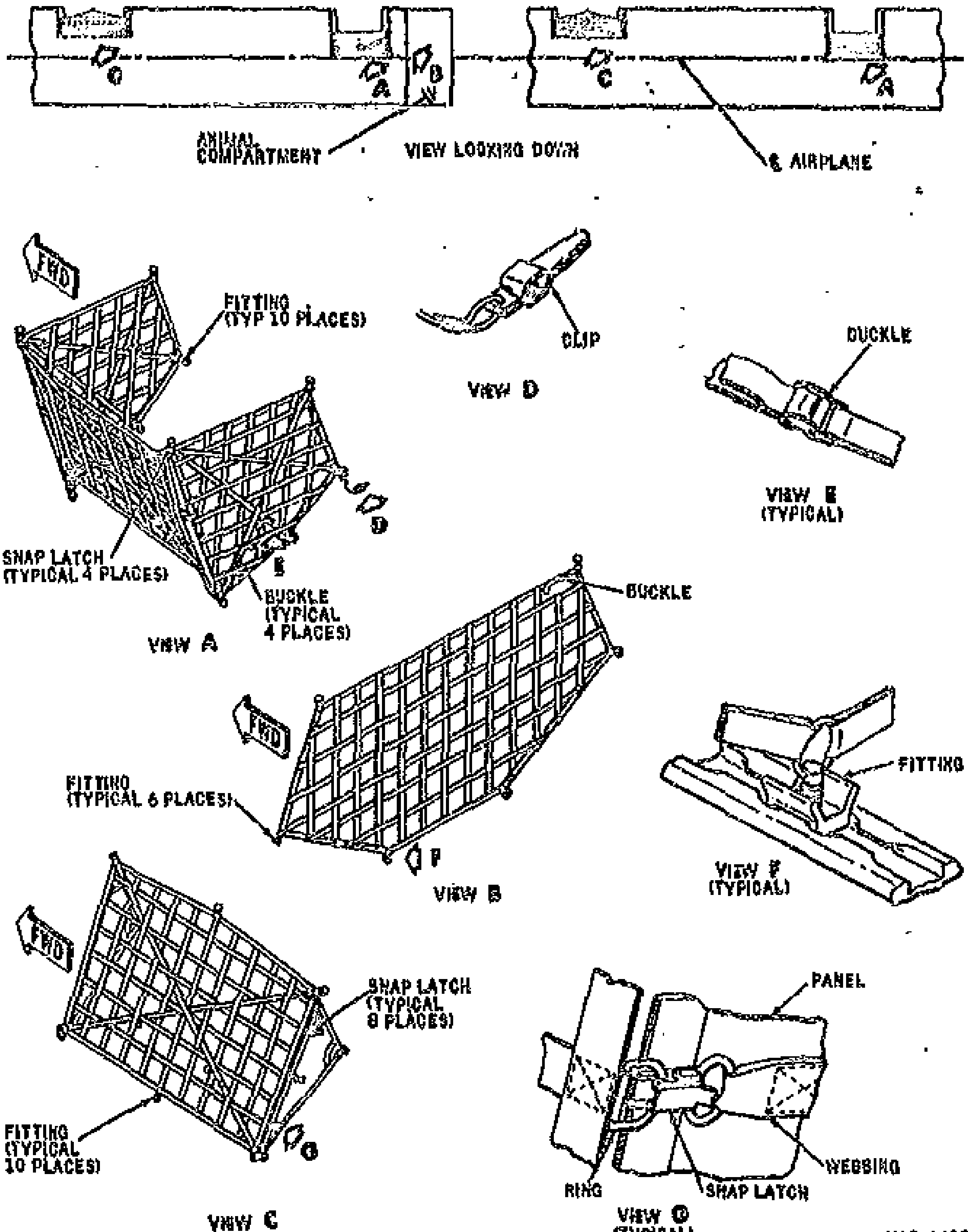
temperature reaches 23.9°C (75°F). The animal portion of the forward lower cargo compartment (aft of the aft cargo loading door) receives additional heat from the low pressure pneumatic system. The pneumatic bleed valve will open when the temperature drops to 15.6°C (60°F) and will remain open until the temperature reaches 21.1°C (70°F).



Forward and Aft Lower Cargo Compartments
Figure 1



Side Loading Cargo System -- Forward and
Aft Lower Cargo Compartments
Figure 2 (Sheet 1)



Side Loading Cargo System -- Forward and
Aft Lower Cargo Compartment
Figure 2 (Sheet 2)

CARGO COMPARTMENTS - MAINTENANCE PRACTICES

1. General

   A. These maintenance practices cover the installation of the cargo loading equipment when converting from the all passenger configuration.

2. Install Hardware and Pallets

   A. Install Hardware to Cargo Floor

      (1) Check all parts as parts are removed from containers, against parts list.

      (2) Mark location of each part so parts can be readily removed and installed.

      NOTE: The centerlines of the end restraint fittings are located in 89-inch intervals. These are measured from the forward face of the divider partition for pallet positions forward of the partition 1 through 12. The forward face of the divider partition is the centerline of the end fitting at that station. The centerline of the end restraint rail, for last pallet position, is located 109 inches aft of the forward face of the divider partition at last position.

      NOTE: The ends of the roller conveyor sections, on the right side of the airplane, are approximately 3 1/2 inches from the centerline of the restraint fittings. The ends of all the other roller conveyor sections are located approximately 1 1/2 inches from the centerline of the end restraint fittings. Color code markings on the conveyors must be in line with the same color on the floor, as seen through the lightning holes.

      (3) Locate side restraint fittings with approximately 20 inches between fittings, as shown in Figure 1.

      (4) Locate ball transfer conveyors as shown in Figure 201, with approximately a 2 1/2-inch space between each conveyor.

      (5) Lock following parts to floor (see Figure 1):

         (a) Roller conveyor assemblies

         (b) Ball transfer conveyor assemblies

         (c) Sill ball caster assembly

         (d) Side restraint rail

         (e) Side restraint fitting assembly

(f) End restraint fitting assembly

(g) End restraint rail assembly.

(6) Lock pallet restraint fittings by placing studs through 3/4-inch diameter holes in tiedown tracks. Slide fitting forward or aft 1/2 inch until spring-loaded lock plunger snaps into 3/4-inch diameter hole. Check carefully to insure lock plunger is fully inserted.

(7) Locate roller conveyor assemblies by color code on floor, position locking knob and lock in place. Conveyors are locked in place by placing stops into 3/4-inch diameter holes in tiedown tracks, and twisting locking knob one quarter of a turn. Stud head must be under flange between 3/4-inch diameter holes, and groove in knob in forward and aft position.

(8) Locate ball transfer conveyors to tiedown tracks and lock in place with locking knobs and studs.

(9) Place two hook fittings of sill caster assembly, over cargo latch spools and lay over into position on floor.

(10) Install all side fittings and rails as shown in section D-D, Figure 201.

(11) Install end fittings, at forward end of position 1, station 292 only, as shown in Figure 201.

<u>CAUTION</u>: CHECK TO INSURE PLUNGER LOCKS ARE FULLY ENGAGED TO PREVENT INADVERTENT REMOVAL OF END FITTINGS.

(12) Aft end of pallet in aft position, is restrained by four fittings on movable partition. When movable partition is not used, install end restraint fittings in this position.

(13) Install end guide rail at aft end of position 1.

<u>NOTE</u>: The end guide rail will help guide the pallets into the airplane. Temporarily remove guide rail before moving pallet into position 1.

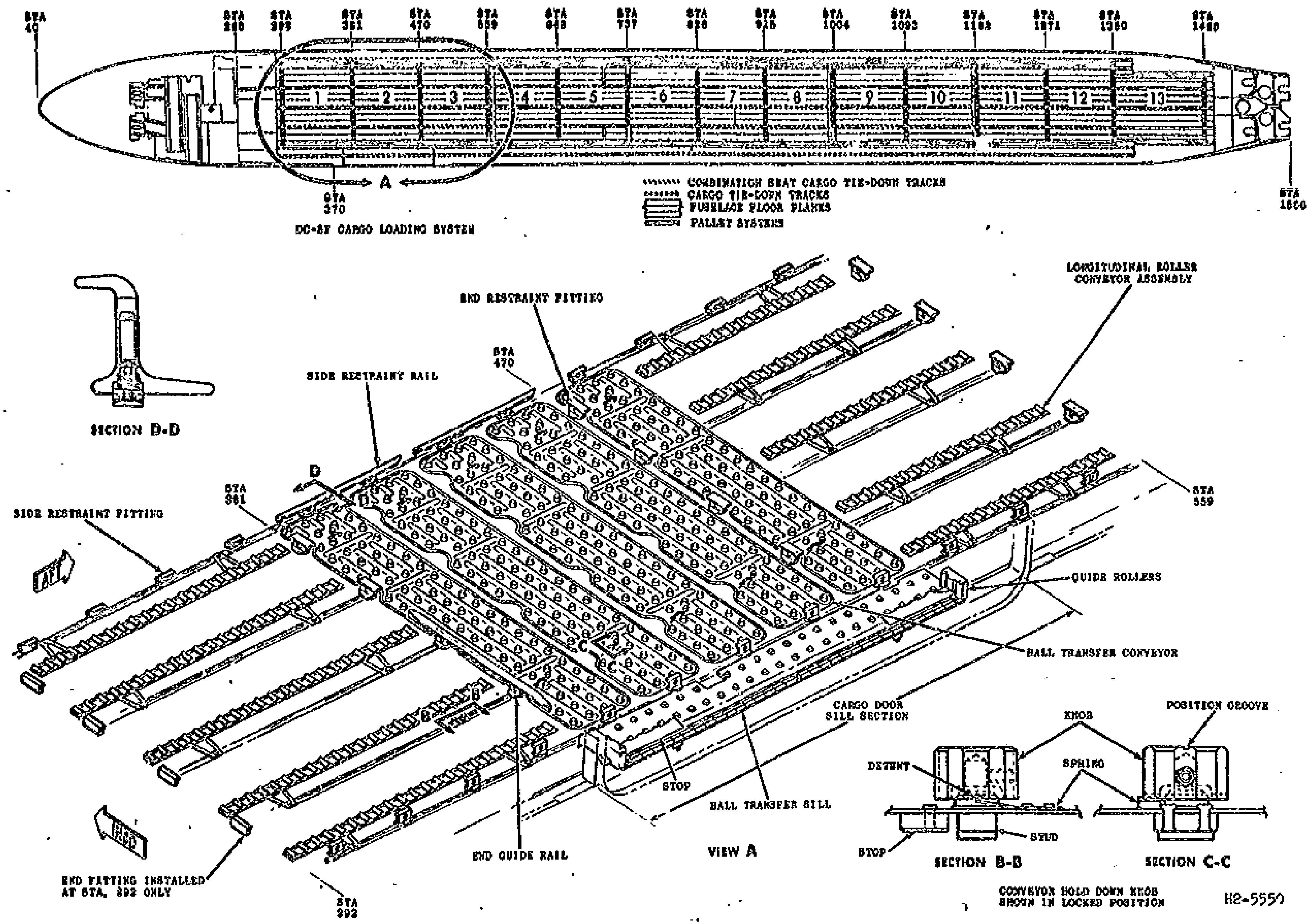
B. Forward Cargo Restraint Barrier Net

(1) Install support beam, cargo barrier net, and crew galley (see 25-50-2). If bulk cargo is loaded, install aisle nets and stanchions.

C. Install Pallets

(1) Install pallet in last position.

<u>WARNING</u>: TO PREVENT THE AIRPLANE FROM BECOMING TAIL HEAVY DURING LOADING OPERATIONS, POSITION 1 PALLET MUST BE LOADED FIRST AND UNLOADED LAST.



Cargo Compartment Equipment -- Installation
Figure 201

(a) Install pallet alignment frame, with lever arm in line with aft guide rollers on sill caster assembly. One end fitting, installed between two forward ball transfer conveyors, may be used to index pallet alignment frame.

(b) Position pallet against alignment frame and lever arm.

(c) Install end fitting on right side, at aft end of position 12.

(d) As pallet is moved aft in airplane, alignment frame and pallet are held agaist side fittings. This will maintain alignment of pallet with side fittings in last position.

(e) As pallet passes position 12 (or 17), end fitting on aft right side will unlock lever arm and stop alignment frame to release pallet.

(f) Remove alignment frame from airplane.

(2) Install Pallets 2 through 12, (DC-8F-50)

(a) As pallets are loaded into airplane, starting with aft pallet, lock end fittings in place at forward end of pallet.

NOTE: Before moving pallet from ball caster transfer section, make certain longitudinal edge is parallel with side fitting. This will prevent excessive rubbing against side fittings, when moving onto roller conveyors. When aligned properly, pallets will require less effort to push.

(b) After pallet in position 2 has been loaded into airplane, install one side fitting before removing sill conveyor assembly from airplane (see Figure 201).

(c) Install remaining three side fittings.

(d) With these operations completed, the airplane is loaded for flight.

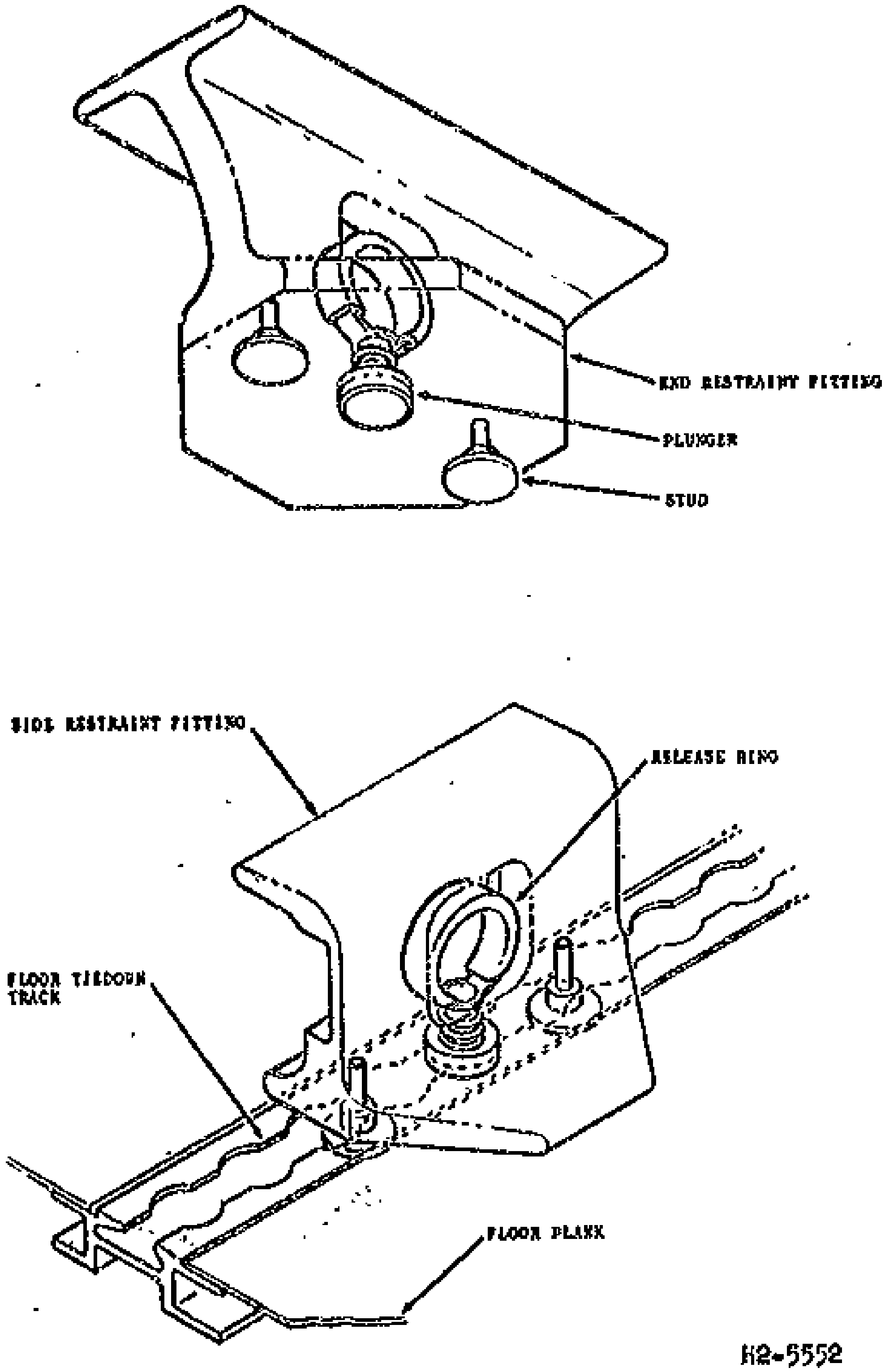
3. Inspection Check Cargo Equipment

A. Check Conveyor Ball Transfers

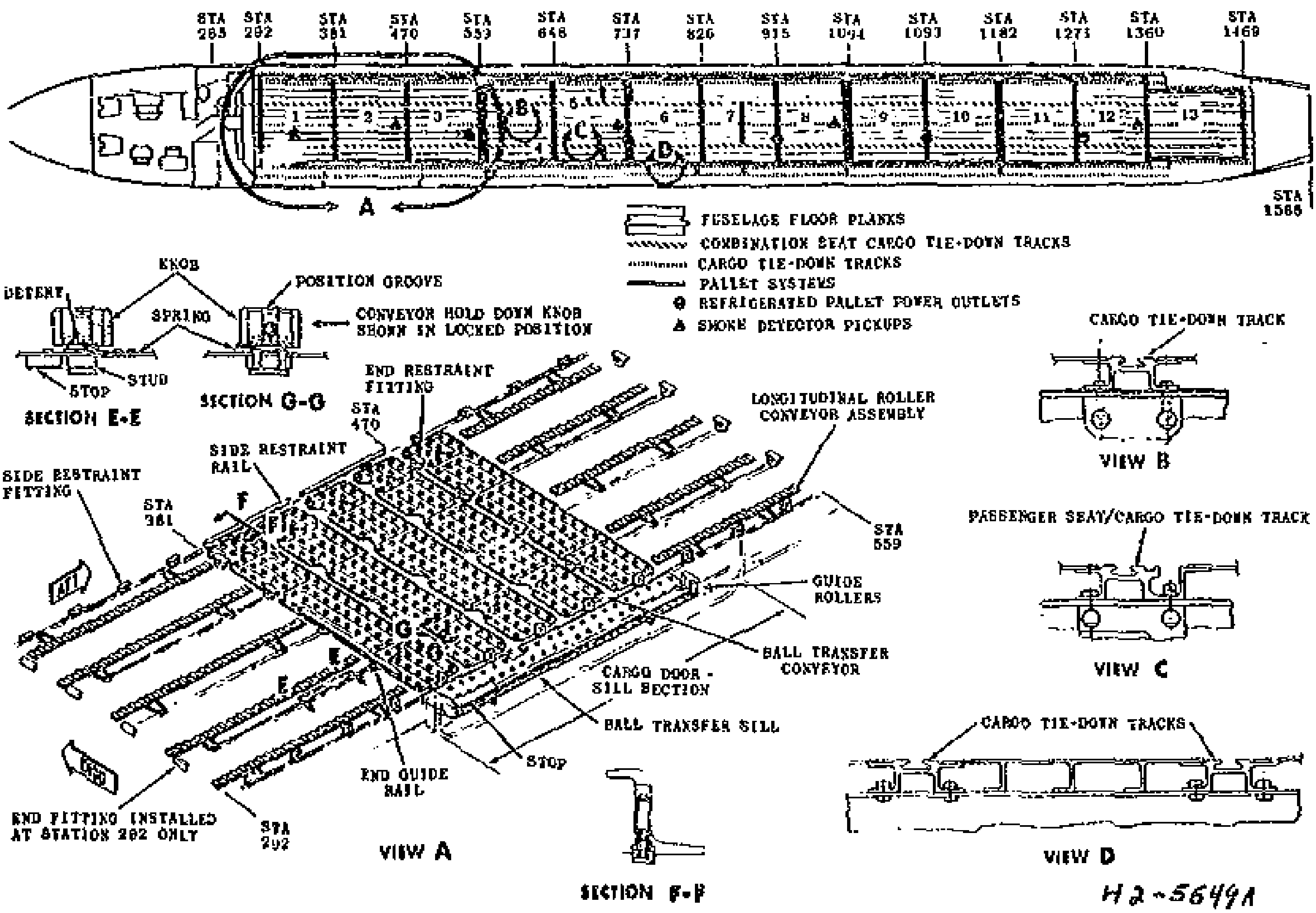
(1) Check conveyor assembly to insure proper action of ball transfers.

(2) Use a dry lubricant on ball transfers to prevent dirt and grime from collecting.

(3) Remove and replace any ball transfer that is broken, frozen, or otherwise inoperative. Disengage conveyor assembly from floor to replace any ball transfer.



Cargo Pallet Restraint Fittings
Figure 202



Cargo Floor Tiedown Tracks
Figure 203

B. Check Sill Ball Transfers

(1) Check sill to insure proper action of ball transfers.

(2) Use a dry lubricant on ball transfers to prevent dirt and grime from collecting.

(3) Remove and replace any ball transfer that is broken, frozen, or otherwise inoperative. Remove plywood panel from metal base to replace ball transfer.

C. Check Sill Guide Rollers

(1) Check guide rollers for free rotation on shafts.

(2) Rub rollers with oil soaked cloth to prevent corrosion.

D. Check Sill Edge Rollers

(1) Check rollers along entire length of sill to determine that rollers are working properly. Rotate rollers by hand and check rollers for free rotation. Remove and replace any roller that is sluggish or has a frozen bearing.

(2) To remove a defective roller, first remove retainers from end of shaft. Rotate shaft and remove rollers from sill.

E. Check Conveyor Rollers

(1) Check conveyor rollers to determine that they are working properly. Rotate rollers by hand and check roller for free rotation. Remove and replace any roller that is sluggish or has a frozen bearing.

(2) To remove a defective roller, remove D ring from end of shaft. Remove shaft and defective roller. Align a new roller with shaft holes in channel, insert shaft and install D ring in shaft.

F. Check Pallet Stops

(1) Check stops at ends of cargo pallet sill to see that stops are easily depressed. This should be done prior to unloading.

(2) Check stops for bent fingers. Remove bent finger by removing hinge pin. Straighten and reinstall finger.

G. Check Lock Assemblies

(1) Check all lock assemblies to insure setscrew in knob is tight on stud. This insures a positive lock.

(2) Apply a few drops of lubricating oil on stud for proper rotation.

CARGO COMPARTMENT - MAINTENANCE PRACTICES

1. General

A. The cargo loading system may be installed in the airplane at either of two locations. One system starts at station 292 and the other at station 302.

B. With the system installed starting at station 292, the airplane is considered to be in Jet Trader configuration. In this configuration, the cargo/passenger divider partition can be utilized to provide restraint for the aft side of the aft pallet. This can be any pallet position 3 through 12.

C. With the system installed starting at station 302, the airplane is in the all-cargo configuration. The cargo/passenger divider partition cannot be used since the pallet position boundaries do not match the locations for the divider partition.

D. These maintenance practices cover the installation and removal of the cargo loading equipment. If less than the complete system is required, modify the instructions accordingly.

2. Install and Remove Hardware

A. Hardware preparation.

(1) Remove all parts from containers and check against parts list.

(2) Check all hardware for loose, missing, or damaged parts.

(3) Check parts with attach studs to ensure that stud shoulders bottom on parts.

(4) Lockpins and lockscrews should be in good working condition.

(5) Rollers and ball transfer casters should roll freely.

(6) Check cargo door sill assemblies to ensure assemblies are in good condition.

(a) Pallet stops should be in raised position when no load is on foot pedal.

(b) Pallet stops must retract below top of rollers when foot pedal is depressed against adjusting screw.

B. Install Hardware (See Figure 201)

NOTE: Location of each part is clearly marked on cabin floor so that parts can be readily installed.

(1) Install adjustable side rail assemblies for pallet positions 1 and 4 through 12.

(a) Place studs in 3/4-inch diameter holes in tiedown tracks and slide fittings 1/2-inch forward or aft. Tighten lock screws in each crosstrack to lock fittings.

NOTE: Adjust the forward side rails (one left, one right) in pallet position 4, and the aft side rails (one left, one right) in pallet position 8, on installation, to suit lock locations across the floor joints.

(b) Position side rail by lifting plunger and sliding rail inboard or outboard on crosstrack. After positioning, check carefully to ensure lock plunger is fully inserted in 3/4-inch diameter holes in crosstrack.

(2) Install rigid end restraint fittings at forward end of pallet position 1 and aft end of pallet position 13.

(a) Place studs in 3/4-inch diameter holes in tiedown tracks and slide fittings 1/2-inch forward or aft until lock plungers snap into 3/4-inch diameter holes. Make sure lock plungers are fully inserted in holes.

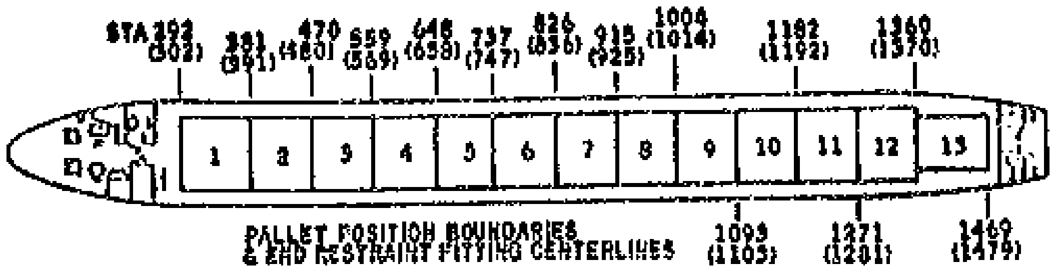
NOTE: When the 86 x 108 inch pallet is used, the centerline for the rigid end restraint fittings at the aft end of pallet position 13 is located 109 inches aft of the centerline for the end restraint fittings located at the aft end of pallet position 12. The 88 x 125 inch pallet requires 126 inches between these fittings.

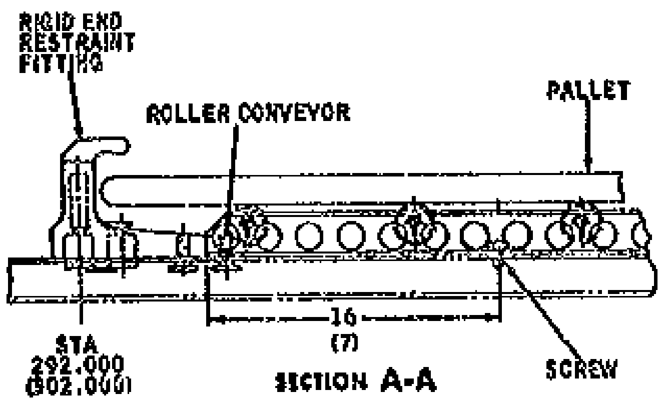
(3) Install end restraint fittings at forward end of each pallet position 2 through 13. Orient fittings to fold down in forward direction except fittings at forward end of pallet position 2 must fold down aft.

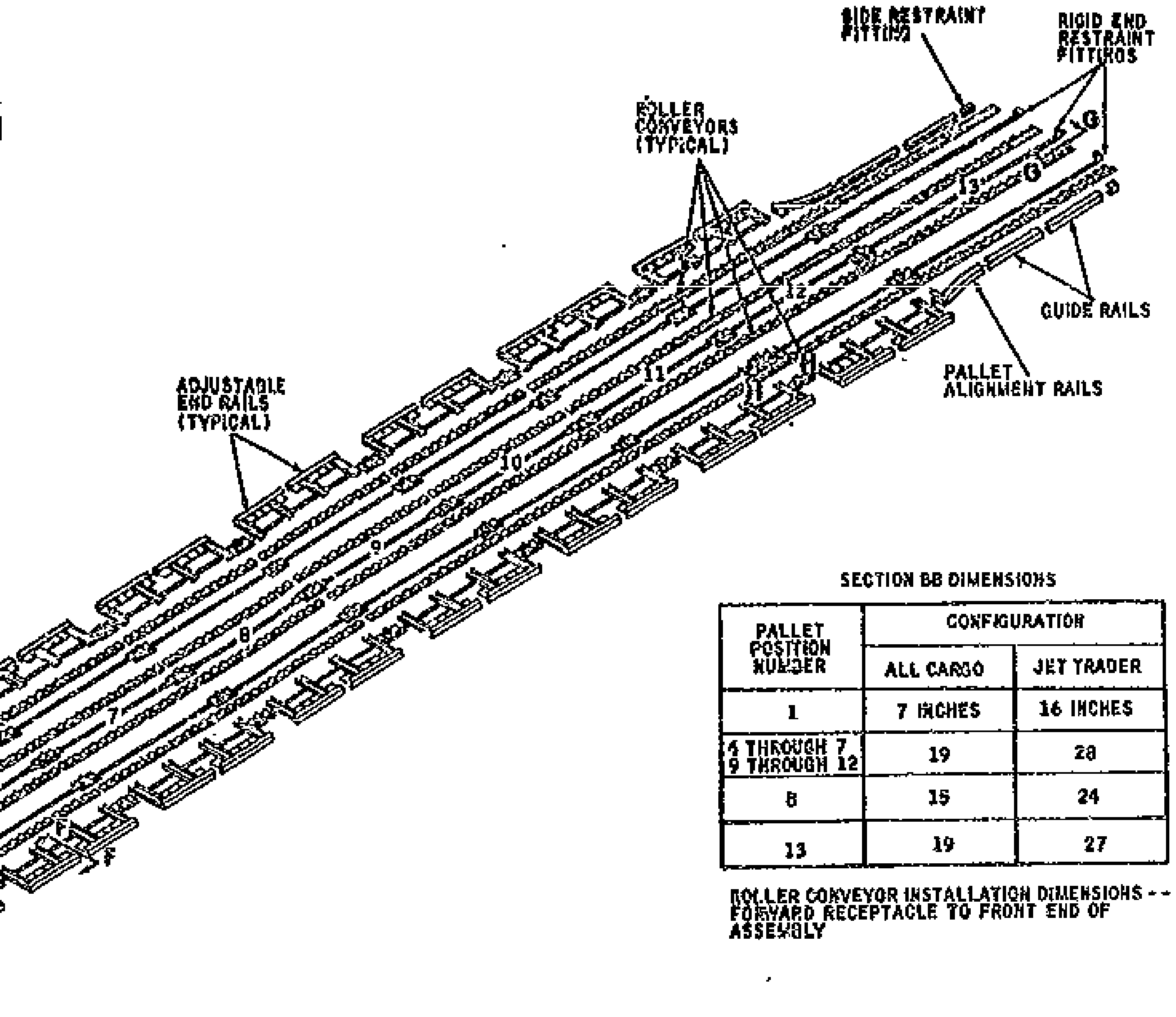
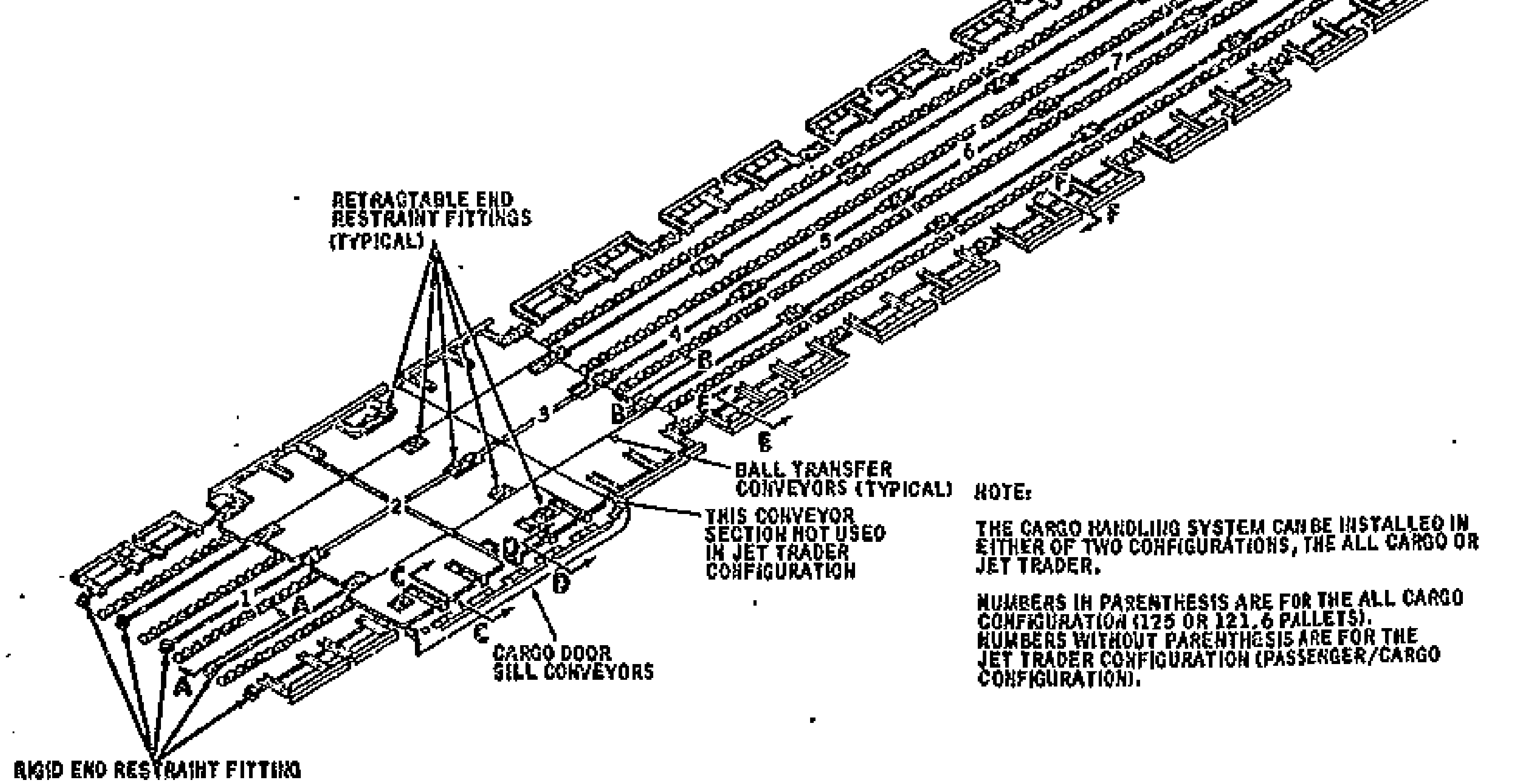
NOTE: For pallet positions 1 through 12, centerlines of the end restraint fittings are located at 89-inch intervals.

(a) Place studs in 3/4-inch diameter holes in tiedown tracks and slide fittings 1/2-inch forward or aft.

(b) Lock fittings in place by pushing down and rotating lockpin knob 90 degrees. Groove in lockpin knob will be in forward and aft direction when fitting is locked in place.





SECTION BB DIMENSIONS

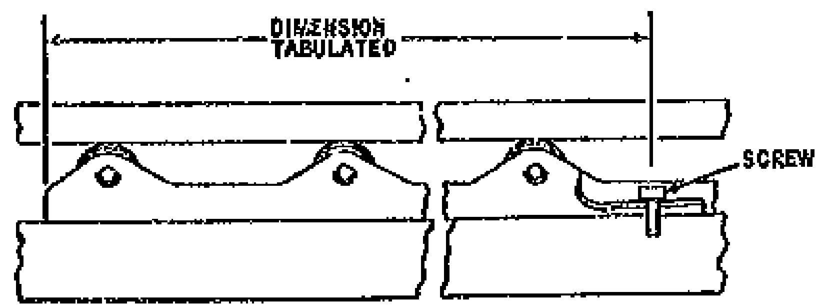
PALLET POSITION NUMBER	CONFIGURATION	
	ALL CARGO	JET TRADER
1	7 INCHES	16 INCHES
4 THROUGH 7 9 THROUGH 12	19	28
8	15	24
13	19	27

ROLLER CONVEYOR INSTALLATION DIMENSIONS -- FORWARD RECEPTACLE TO FRONT END OF ASSEMBLY

NOTE:

THE CARGO HANDLING SYSTEM CAN BE INSTALLED IN EITHER OF TWO CONFIGURATIONS, THE ALL CARGO OR JET TRADER.

NUMBERS IN PARENTHESIS ARE FOR THE ALL CARGO CONFIGURATION (125 OR 121.6 PALLETS). NUMBERS WITHOUT PARENTHESIS ARE FOR THE JET TRADER CONFIGURATION (PASSENGER/CARGO CONFIGURATION).

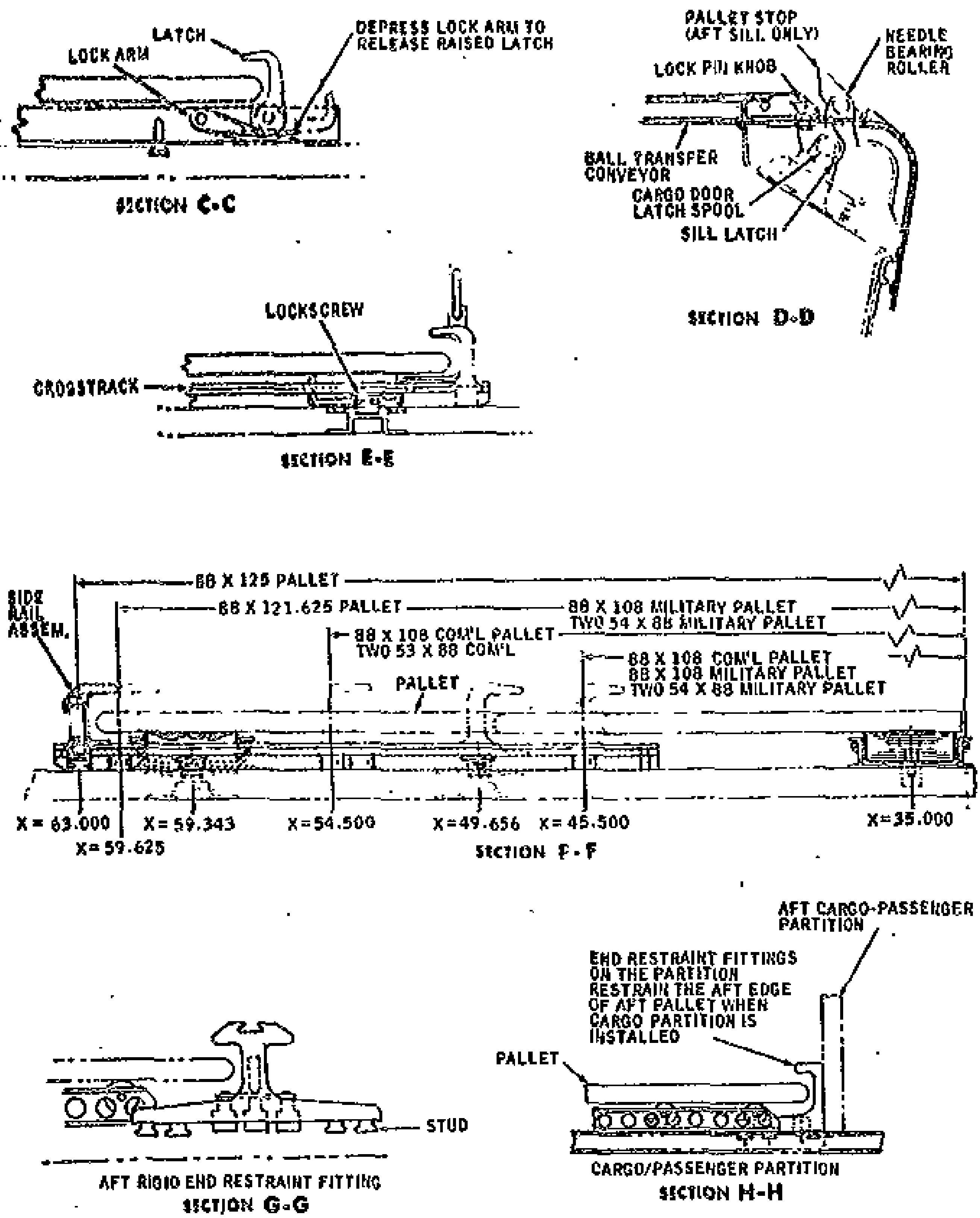


SECTION B-B

HA2-6195

Cargo Compartment Equipment -- Maintenance Practices
Figure 201 (Sheet 1)

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Cargo Compartment Equipment -- Maintenance Practices
Figure 201 (Sheet 2)

Printed in U.S.A.

STATION NUMBER (CROSSTRACK CENTERLINES)

Pallet Position Number	Jet Trader Configuration		All Cargo Configuration	
	Left Side	Right Side	Left Side	Right Side
1	313.0 333.0 353.0 373.0	313.0 333.0 353.0 373.0	315.0 333.0 353.0 373.0	313.0 333.0 353.0 373.0
2	401.5 427.5 447.5 469.5	392.0 428.0 448.0 470.0	401.5 427.5 447.5 469.5	402.0 428.0 448.0 470.0
3	490.5 518.0 536.0 559.0	490.0 513.0 536.0 559.0	490.5 518.0 536.0 559.0	490.0 513.0 536.0 559.0
4	571.0 591.0 616.0 636.0	571.0 591.0 616.0 636.0	581.0 601.0 626.0 646.0	581.0 601.0 626.0 646.0
5	660.0 680.0 705.0 725.0	660.0 680.0 705.0 725.0	670.0 690.0 715.0 735.0	670.0 690.0 715.0 735.0
6	749.0 769.0 794.0 814.0	749.0 769.0 794.0 814.0	759.0 779.0 804.0 824.0	759.0 779.0 804.0 824.0
7	838.0 858.0 883.0 903.0	838.0 858.0 883.0 903.0	848.0 868.0 893.0 913.0	848.0 868.0 893.0 913.0
8	927.0 947.0 972.0 992.0	927.0 947.0 972.0 992.0	937.0 957.0 982.0 1002.0	937.0 957.0 982.0 1002.0
9	1016.0 1036.0 1061.0 1081.0	1016.0 1036.0 1061.0 1081.0	1026.0 1046.0 1071.0 1091.0	1026.0 1046.0 1071.0 1091.0
10	1105.0 1125.0 1150.0 1170.0	1105.0 1125.0 1150.0 1170.0	1115.0 1135.0 1160.0 1180.0	1115.0 1135.0 1160.0 1180.0
11	1194.0 1214.0 1239.0 1259.0	1194.0 1214.0 1239.0 1259.0	1204.0 1224.0 1249.0 1269.0	1204.0 1224.0 1249.0 1269.0
12	1283.0 1303.0 1328.0 1348.0	1283.0 1303.0 1328.0 1348.0	1293.0 1313.0 1338.0 1358.0	1293.0 1313.0 1338.0 1358.0

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(4) Install pallet alignment rails, one each side of pallet position 13.

NOTE: Studs in the forward pad are installed in the tiedown track at 49.656 inches from centerline. Studs in the center and aft pads are installed in the tiedown track at approximately 44.500 inches from the centerline.

(a) Place studs in 3/4-inch diameter holes in tiedown track and slide fitting 1/2-inch forward.

(b) Rotate lockpin knob 90 degrees to lock fitting in place. Groove in lockpin knob will be pointing forward and aft when fitting is locked in place.

(5) Install two side guide rails and one side restraint fitting each side of pallet position 13.

(a) Place studs in 3/4-inch diameter holes in tiedown tracks and slide assembly 1/2-inch forward until lock plungers snap into 3/4-inch diameter holes. Make certain lock plungers are fully inserted in holes.

(6) Install roller conveyors in pallet positions 1 and 4 through 13.

NOTE: To locate the long sections of roller assemblies in each pallet position, see Figure 201, section B-B.

(a) Secure long sections of roller conveyor assemblies to floor with screws. Receptacles are provided in fuselage floor at 10 inches and 35 inches right and left of centerline for this purpose.

(b) Install short sections of roller assemblies between crosstracks in side rail assemblies.

NOTE: When side rails are positioned for 14-inch or 10-inch aisle, the short sections of roller conveyors may be installed in the track directly inboard of side rails to provide better support for edge of pallet.

(c) Place studs in 3/4-inch diameter holes in tiedown track and slide assembly 1/2-inch forward.

(d) Rotate lockpin knob 90 degrees to lock fitting in place. Groove in lockpin knob will be pointing forward and aft when conveyor is locked in place.

(7) Install ball transfer conveyors in pallet positions 2 and 3.

(a) Position outer conveyor sections with side rail crosstrack centerlines in tabulated positions (see Figure 201, sheet 3).

(b) Place conveyor studs in tiedown tracks and slide conveyor forward 1/2-inch.

(c) Lock conveyors in place with lockscrews.

NOTE: In the cargo door area, latches for side restraint of the pallet are a part of the ball transfer conveyors. The latches are automatically locked when in raised position. To unlock and lower latches, depress the lock arm at the bottom of the latch. To relocate the latches in the crosstracks, remove the latch assembly by depressing the spring clip and retracting the pins. After latch is reinstalled, check to ensure the spring clip is between the pins.

(d) Attach center ball transfer conveyors by placing studs in 3/4-inch diameter holes in tiedown tracks.

(e) Secure center conveyor sections by pushing down and rotating lockpin knob 90 degrees. Groove in lockpin knob will point forward and aft when conveyors are locked in place.

(8) Install forward and aft cargo door sill conveyors.

(a) Position conveyors with hook fittings over cargo door latch spools. Conveyors lock to cargo door spools with spring loaded pins in the hook fittings (see section D-D, Figure 201).

NOTE: If cargo door is to be closed, remove sill conveyors. To remove sill conveyors, pull up lockpins and lift conveyors from the door sill.

C. Remove Hardware

(1) Remove center ball transfer conveyor sections. Rotate lockpin knob 90 degrees, slide conveyor sections 1/2-inch aft, and remove section.

(2) Remove outer ball transfer conveyor sections. Loosen lockscrews, slide conveyor sections 1/2-inch aft, and remove sections.

(3) Remove long sections of roller conveyors. Remove screws which secure each assembly to floor and remove conveyors.

(4) Remove short sections of roller conveyors located between crosstracks in side rail assemblies. Rotate lockpin knob 90 degrees, slide conveyor section 1/2-inch forward or aft, and remove conveyors.

(5) Remove pallet aligning rails from pallet position 13. Rotate lockpin knob 90 degrees, slide rails 1/2-inch forward or aft and remove from tiedown tracks.

(6) Remove side guide rails and side restraint fittings from pallet position 13. Lift plunger ring and slide assembly 1/2-inch forward or aft and remove from tiedown track.

(7) Remove adjustable side rails. Loosen lockscrews, slide rails 1/2-inch forward or aft and remove from tiedown track.

(8) Remove retractable end restraint fittings from forward end of pallet positions 2 through 13. Unlock fittings by rotating lockpin knobs 90 degrees, slide fittings 1/2-inch forward or aft and remove from tiedown tracks.

(9) Remove rigid end retraint fittings forward of pallet position 1 and aft of pallet position 13. Lift plunger ring and slide fittings 1/2-inch forward or aft and remove fittings.

3. Inspect/Check Cargo Loading Equipment

A. Conveyor Ball Transfers

(1) Check conveyor system to ensure proper action of ball transfers.

(2) Use a dry lubricant on ball transfers to prevent dirt and grime from collecting.

(3) Remove and replace any ball transfer that is broken, frozen, or otherwise inoperative. Disengage conveyor assembly from floor to replace any ball transfer.

B. Sill Edge Rollers

(1) Check sill edge rollers along entire length of sill to determine that rollers are working properly. Rotate rollers by hand and check for free rotation. Remove and replace any roller that is sluggish or has a frozen bearing.

(2) To remove a defective roller, first remove retainers from end of shaft. Rotate shaft and remove rollers from sill.

C. Conveyor Rollers

(1) Check conveyor rollers to determine that rollers are working properly. Rotate rollers by hand and check for free rotation. Remove and replace any roller that is sluggish or has a frozen bearing.

D. Pallet Stops

(1) Check stops at ends of cargo pallet sill to see that stops are easily depressed. This should be done prior to unloading.

(2) Check stops for bent fingers. If bent, remove bent finger by removing hinge pin, and straighten finger.

E. Lock Assemblies

(1) Check all lock assemblies to ensure that setscrew in knob is tight on stud. This ensures a positive lock.

(2) Apply a few drops of lubricating oil on stud for proper rotation.

LOWER CARGO COMPARTMENT PANELS - MAINTENANCE PRACTICES

1. General

A. Removal and installation procedures for the sidewall lining and ceiling panels in the forward and aft cargo compartments are identical except that tape is not used around the blowout panels.

B. The blowout panels look the same as the other panels except the material is thinner and the screw holes are slotted to the outer edge of the panel.

C. Approved repairs are made with pressure sensitive liner used to provide a permanent repair for damaged areas up to 4 x 4 inches in fiberglas cargo panels. No waiting is required for the adhesive to dry or cure.

2. Tools and Equipment Required

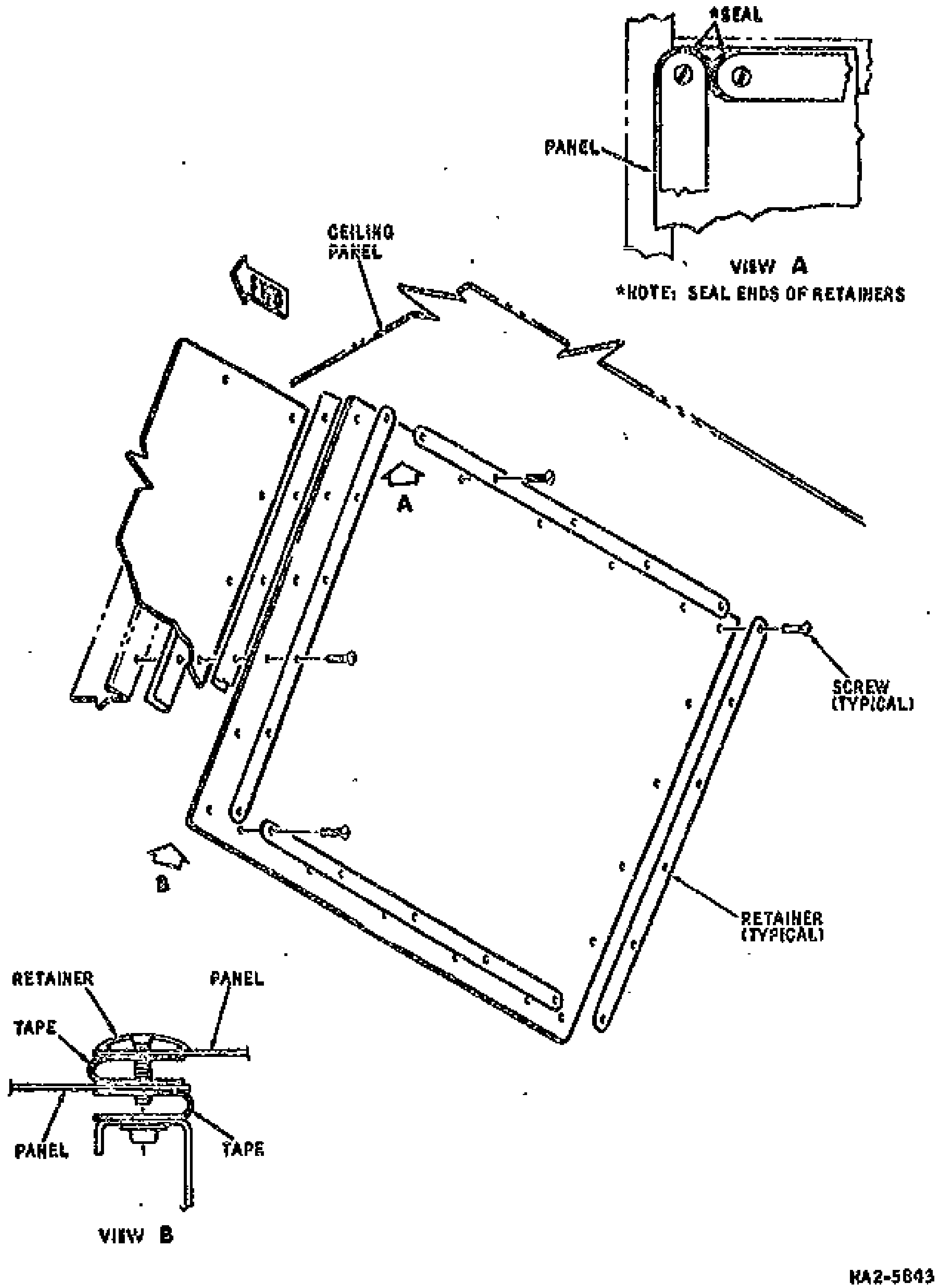
NOTE: Equivalent substitutes may be used instead of the following listed items.

Item	Name	Number	Manufacturer	Use
A	Tape	C506	Arno Tape Company	To seal panels
B	Sealant	RTV-1016 RTV-9910	General Electric Company	To seal retainer ends
C	Stratoglas pressure sensitive liner	600 Si .028	Air Logistics Company	To patch damaged area
D	Sandpaper			To remove gloss from cargo liner
E	Methyl ethyl ketone (MEK)	TT-M-00261	Commercially available	To clean area after sanding
F	Knife or snips			To cut and trim patch

3. Removal/Installation Sidewall Lining Panels (See Figure 201)

A. Remove panels

(1) Remove screws, washers, retainers, and net anchor plates as applicable.



Sidewall Lining Panel -- Removal/Installation (Typical)
Figure 201

(2) Remove panels.

NOTE: Remove small panels first. Edges of small panels overlap larger panels. Note location and installation of sealing tape.

B. Install panels.

(1) Install tape to edges of all panels, except blowout panels.

CAUTION: DO NOT SEAL OR ADD WASHERS TO SCREWS IN BLOWOUT PANELS.

(2) Position and install panels and retainers.

NOTE: Install small panels last.

(3) Seal ends of retainers with sealant.

(4) Install net anchor plates as applicable.

4. Removal/Installation Ceiling Panels (See Figure 202).

A. Remove panels.

(1) Remove cargo compartment service light grills (see Chapter 33).

(2) Remove cargo compartment overheat detector grills (see Chapter 26).

(3) Remove ceiling panel retainers, net anchor plates, and remove panel.

B. Install panels.

(1) Install tape to edges of all panels, except blowout panels.

CAUTION: DO NOT SEAL OR ADD WASHERS TO SCREWS IN BLOWOUT PANELS.

(2) Position and install panel and retainers.

NOTE: The blowout panels are installed last.

(3) Seal ends of retainers with sealant.

(4) Install net anchor plates as applicable.

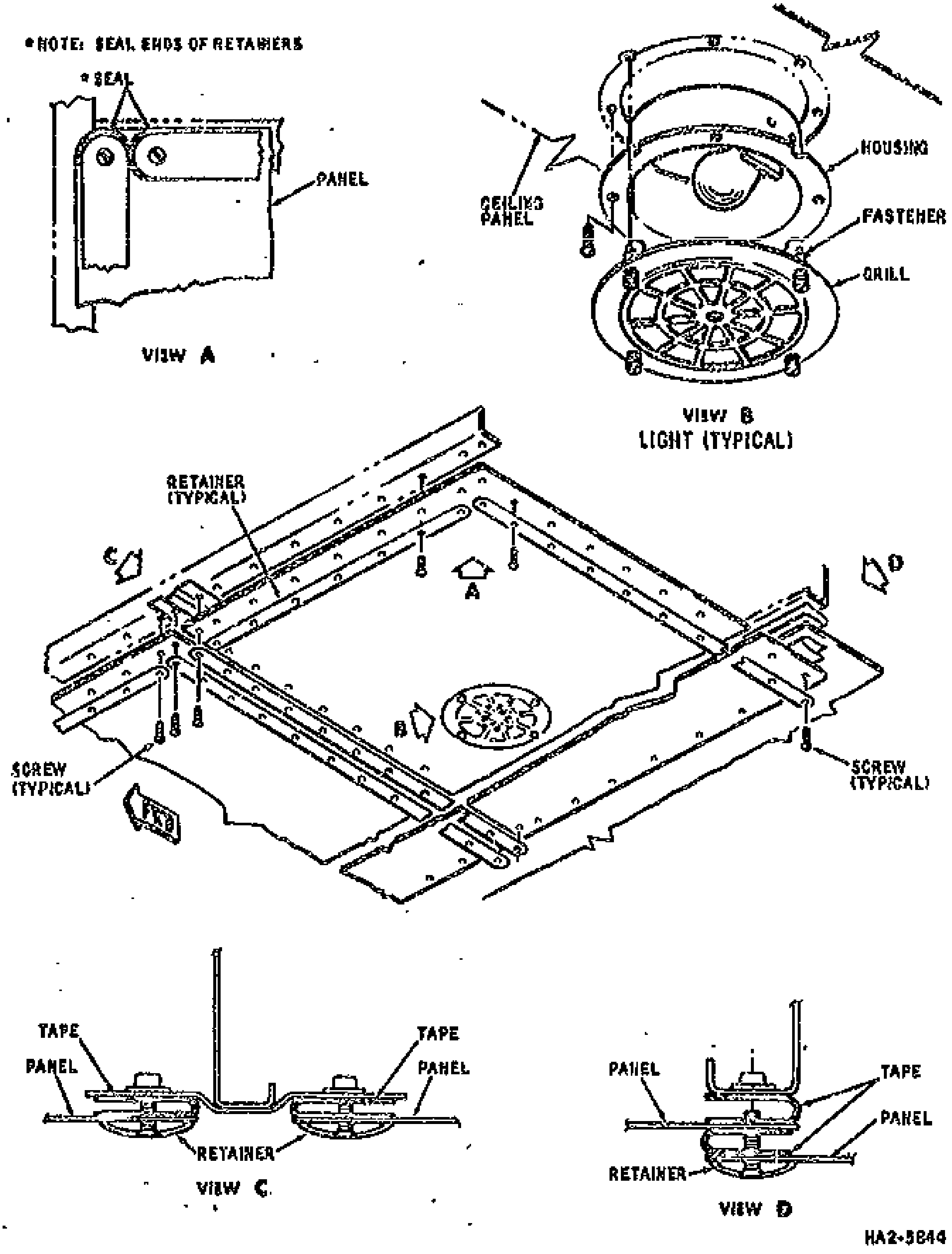
(5) Install overheat detector grills (see Chapter 26).

(6) Install service light grills (see Chapter 33).

5. Inspection/Check - Cargo Compartment Panels

A. Check panels.

(1) Check for canted screwheads. Canted screwheads may indicate misaligned panels.



Ceiling Lining Panels -- Removal/Installation (Typical)
Figure 202

TR 25-34

TEMPORARY REVISION 25-34

FILING INSTRUCTIONS:	Insert this Temporary Revision adjacent to 25-51-1, CODE 1, Page 205, Removal/ Installation. Retain this Temporary Revision until notified to remove it.
DESCRIPTION AND REASON:	This Temporary Revision provides information concerning FAA flame penetration requirements for cargo compartment liner repairs.
EFFECTIVITY:	ALL

Approved Repairs for the lower cargo compartment panels are not applicable after September 20, 1991. After this date, the FAA has required that cargo compartment liner repairs have flame penetration equal to that of the existing liner material. Refer to SRM Temporary Revision 53-56 for cargo compartment liner repair.

(2) Check height of screwheads.

CAUTION: RETAINING SCREWHEADS MUST BE SUNK BELOW TOP OF RETAINERS TO AVOID DAMAGE TO CARGO.

(3) Make certain all screws have been installed.

(4) Make certain all required sealing has been completed.

WARNING: ALLOWABLE LEAKAGE RATE FOR CLASS D COMPARTMENTS MUST NOT BE EXCEEDED SO THAT COMBUSTION WILL NOT BE SUSTAINED IN EVENT OF FIRE.

6. Approved Repairs Lower Cargo Compartment Panel (See Figure 203)

A. Repair panel.

(1) Remove loose glass fibers and smooth edges of damaged hole.

(2) Prepare patch from Stratoglas material.

(a) Cut patch large enough to cover damaged area and overlap one inch on all sides.

(b) Trim corners of rectangular patch.

(c) Bevel edges of patch to minimize possibility of patch being torn loose.

(3) Sand away gloss surface from around damaged area. Sanded area to be same size as patch.

(4) Wipe sanded surface with clean cloth moistened with methyl ethyl ketone.

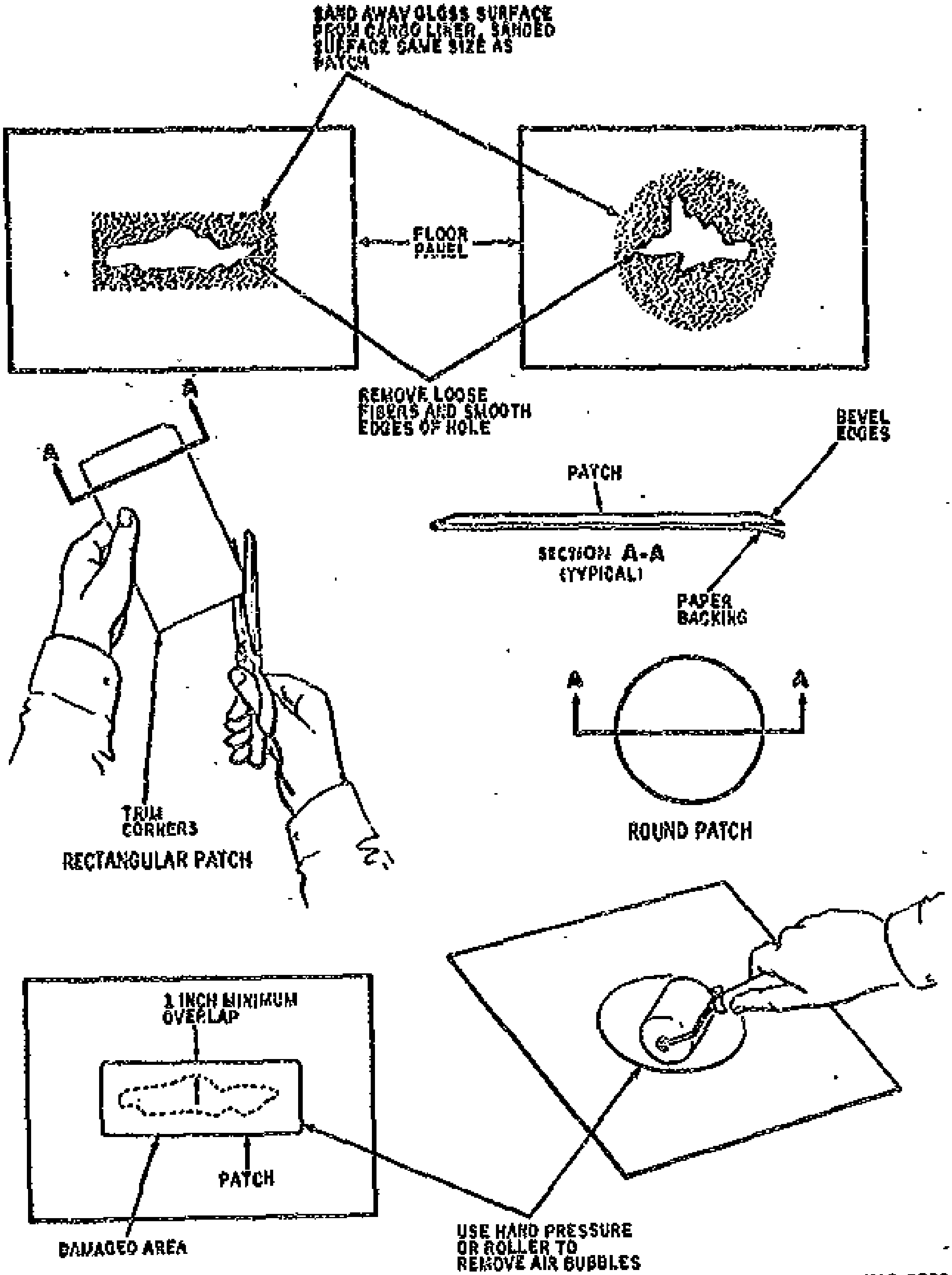
(5) Wipe surface dry with clean cloth.

(6) Remove paper backing from patch and carefully place patch over damaged area making sure patch overlaps damaged area by one inch on all sides.

NOTE: Best adhesion is obtained when minimum temperature in cargo compartment is above 27°C (80°F). Use heating equipment to insure minimum bonding temperature.

(7) Apply light pressure to patch, with hand or rubber roller, to remove air bubbles between patch and cargo panel.

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Lower Cargo Compartment Panel -- Approved Repair
Figure 203

CARGO COMPARTMENT HOISTING AND TRAVERSE CONTROL SYSTEMS

1. Description

A. The hoisting and traverse control system is a means of lifting cargo containers up into the forward and aft lower cargo compartments and then moving them into the cargo area. The electrical controls and circuitry for the two cargo systems are identical in operation.

The cargo containers are hoisted into the cargo compartments by electric motor-driven hoisting assemblies. The hoisting assemblies consist of an electric motor and gearbox and dual cable drum drive assemblies. The motor has a manual release brake that is used to lower the containers if no electrical power is available on the airplane. The gearbox is connected to a cable drive assembly. The drive assembly consists of two cable drum assemblies interconnected by a drive shaft. The aft cable drum incorporates a drive gear and socket assembly. This is for manually lowering the containers by an external hand crank in case the motor fails or the gearbox jams. The cables from the two dual drums are attached to lifting assemblies. The lifting assembly consists of two cable attach supports, two spring-loaded lock latches, and two rub strips, all connected together by a track assembly. The track has a detent at each end for the cargo container rollers to sit in during hoisting. The track completes the cargo compartment tracks so that the cargo containers can be shifted. There are four release stops for the lock latches. Two of the stops are incorporated, one each on the two dual drum assemblies, and two are incorporated on the left side of the cargo compartment.

B. The traverse systems consist of dual cable loop systems installed in the cargo compartment ceilings between the cargo container tracks. The loops are manually operated separately by a cable drum assembly. There are pickup rings installed on the center cables of the traverse loops. These pickup rings ride in guide rails. Stops, installed at each end of the guide rails, control the travel of the traverse cables. The pickup rings are spaced so that the cargo containers can be properly loaded into the cargo compartment. There are five cargo containers in the forward cargo compartment, two forward and two aft of loading door. The last container hoisted is left on the hoisting assembly over the cargo door. There are six cargo containers in the aft cargo compartment, three forward and two aft of the loading door. The last container hoisted is left on the hoisting assembly over the cargo door.

2. Operation

A. In loading, the lifting assemblies are extended from the cargo compartments by the hoisting motors. The lifting assemblies are attached to each end of the cargo containers. The spring-loaded lock latches are manually released. The hoisting track is placed beneath the cargo container rollers that must be placed in the hoisting track detents. The spring-loaded lock latches are released. The tangs of the latches engage the rollers on the cargo container, preventing the cargo container from moving on the track during

hoisting. The cargo container is then hoisted up into the cargo compartment. The spring-loaded lock latches engage the stops, releasing them. At the same time, the lip ends of the hoisting track engage the lip ends of the cargo track to align the two tracks. The pins on the cargo container engage the pickup rings of the traverse loop system. The container now can be moved forward or aft manually. A wrench with a square shaft end and a speed handle is inserted through an access opening in the fuselage into the socket of the traverse cable drum assembly. The drum assembly on the right moves the cargo container aft, and the cable drum assembly on the left moves the cargo container forward. If no electrical power is available on the airplane, the cargo containers can be lowered manually by a series of short pulls on the brake release ring.

B. In the event of a jammed gearbox, the cargo container can be lowered manually by inserting a speed-handle-type wrench with a worm gear on the shaft end into the socket located on the aft end of the aft dual-cable drive drum assembly. The worm drive engages the gear. Turning the crank sufficiently to relieve the load from the motor and then removing the motor, the container can be lowered manually. Access to the motor is obtained through a removable door in the cabin floor located approximately 36 inches from airplane centerline on the right side above the cargo loading door.

CARGO COMPARTMENT HOISTING AND TRAVERSE SYSTEMS - MAINTENANCE PRACTICES

1. General

   A. The removal, installation, adjustment, and test procedures for the hoisting and traverse systems in all lower cargo compartments are identical.

   B. All cargo containers must be removed from the airplane when rigging the hoisting and traverse systems.

   C. For cables and cable run numbers see Chapter 91.

2. Removal/Installation - Cargo Container Hoist and Traverse Systems

   A. Remove cargo container hoist system.

      (1) Lower lifting tracks to full down.

      WARNING: THE LIFTING TRACKS WILL FALL DANGEROUSLY FAST IF THE ACTUATOR IS REMOVED WITH THE SYSTEM IN THE UP POSITION.

      (2) Open cargo hoist system circuit breakers on the forward and aft electrical panels.

      WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

      (3) Disconnect and cap electrical connector from actuator.

      (4) Remove brake release cable pulley guard pins from pulley bracket.

      (5) Disconnect and remove brake release cable.

      (6) Remove actuator from hoist drive assembly and cap electrical receptacle.

      (7) Disconnect cables from lock latches on lifting tracks.

      (8) Remove shroud from cable drums.

      (9) Rotate cable drums to gain access to cable terminals.

      (10) Remove cable terminal retainers from cable drums.

      (11) Remove guard pins from pulley brackets and cable drums.

      (12) Remove fairleads from pulley brackets.

(13) Disengage and remove cables.

(14) Remove hoist drive assembly.

B. Install cargo container hoist system.

(1) Open cargo hoist circuit breakers on the forward and aft cabin electrical panels.

WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

(2) Place hoist drive assembly in position and secure to structure.

(3) Engage cable terminals to cable drums and route through pulley brackets.

(4) Install fairleads to pulley brackets.

(5) Install guard pins in pulley brackets and cable drums.

(6) Install cable retainers on cable drums.

(7) Install shroud to cable drums.

(8) Connect cables to lock latches on lifting tracks.

(9) Uncap electrical receptacle on actuator and install actuator to hoist drive assembly.

(10) Route brake release cable through pressure seal and pulley bracket.

NOTE: Tighten cable turnbuckle until shoulder of pull fitting just touches shoulder of rubber pressure seal. Safety turnbuckle.

(11) Connect brake release cable to arm on actuator.

(12) Install brake release cable pulley guard pins in pulley bracket.

(13) Uncap and connect electrical connector to actuator.

(14) Adjust hoist system (see paragraph 3A).

(15) Close cargo hoist circuit breakers.

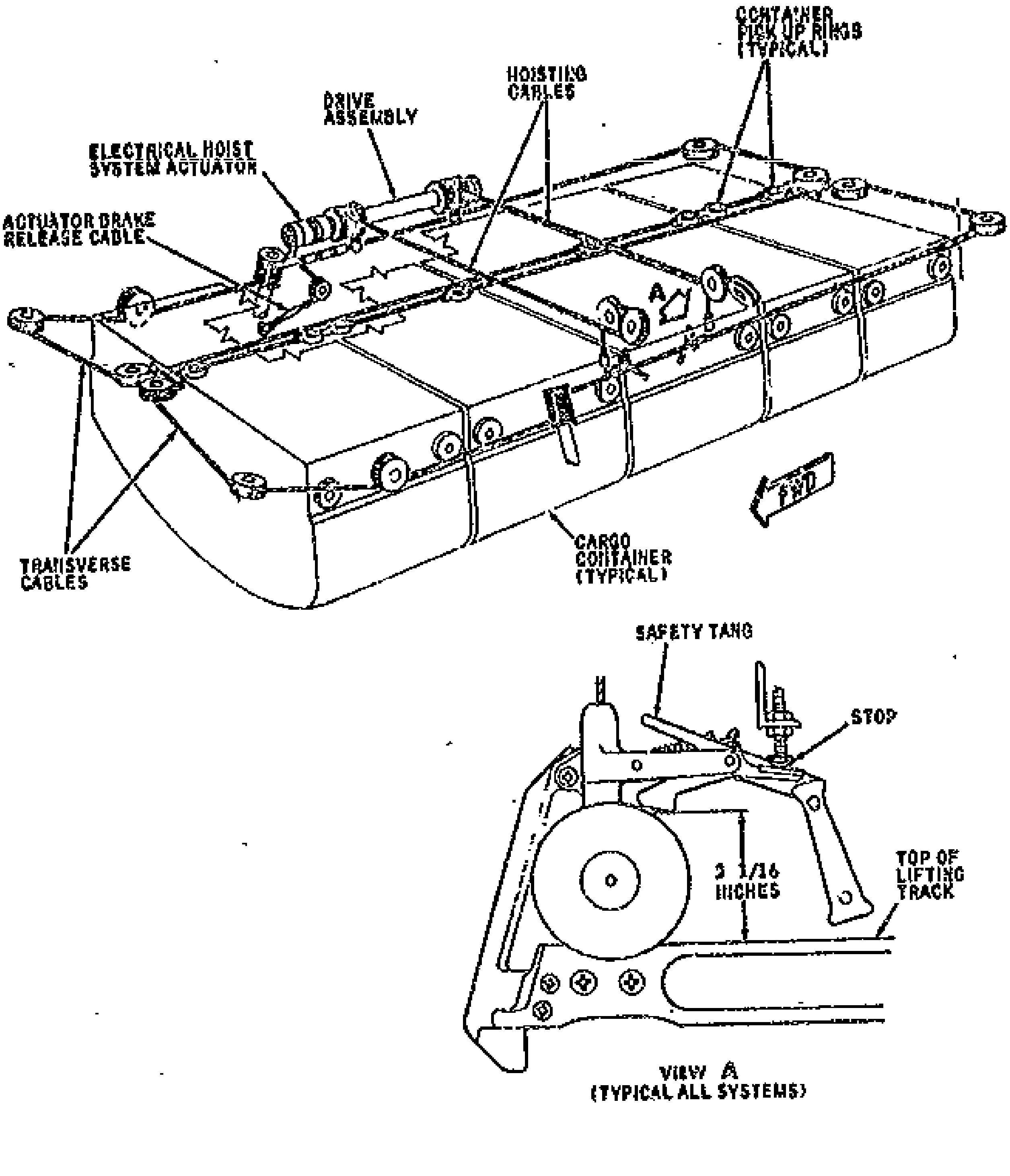
(16) Test hoist system for normal operation (see paragraph 3C).

C. Remove traverse system.

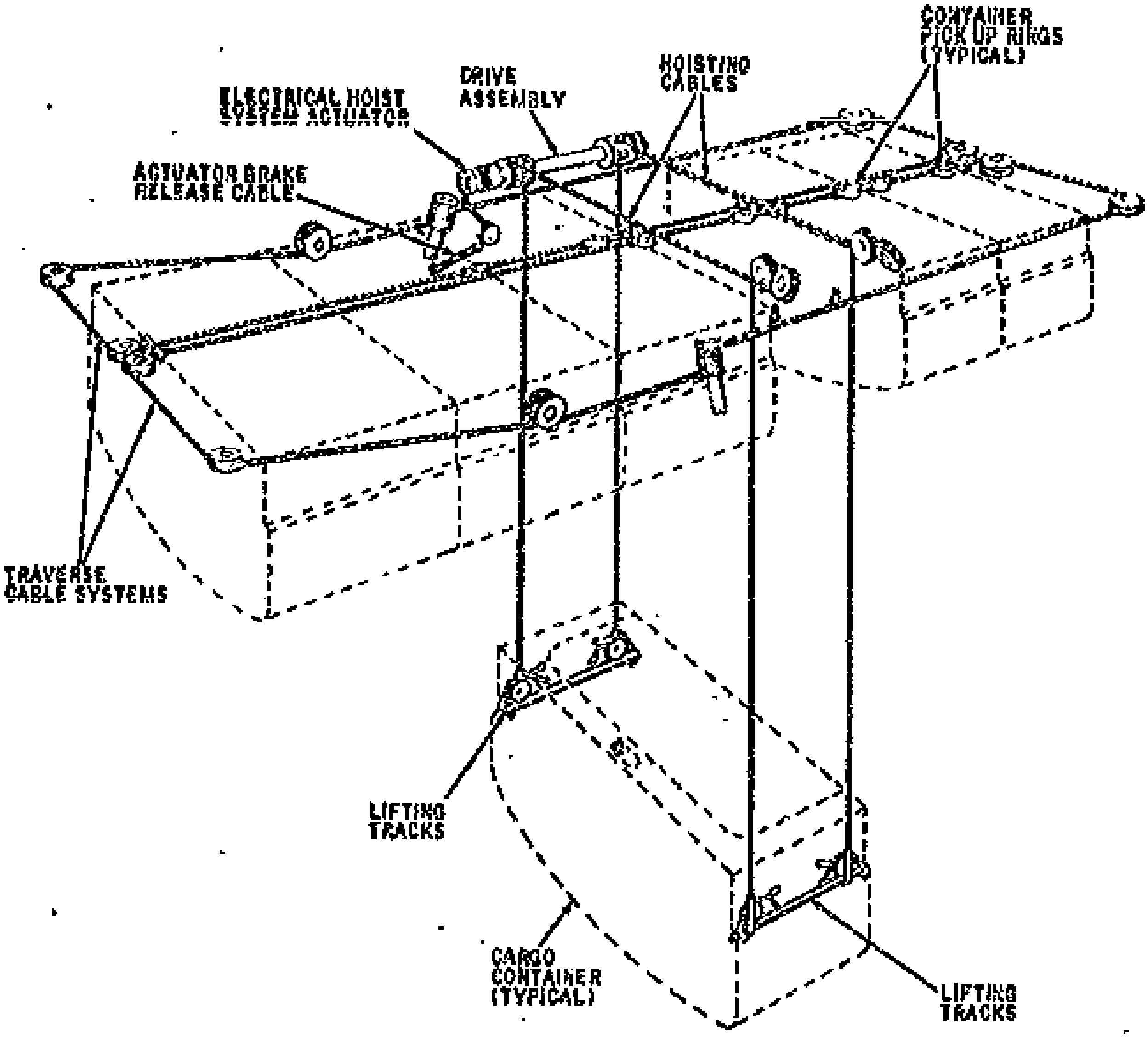
(1) Move system until turnbuckle is centered in cargo door opening.

(2) Disconnect turnbuckle.

(3) Disconnect aft cable from aft pick up ring.

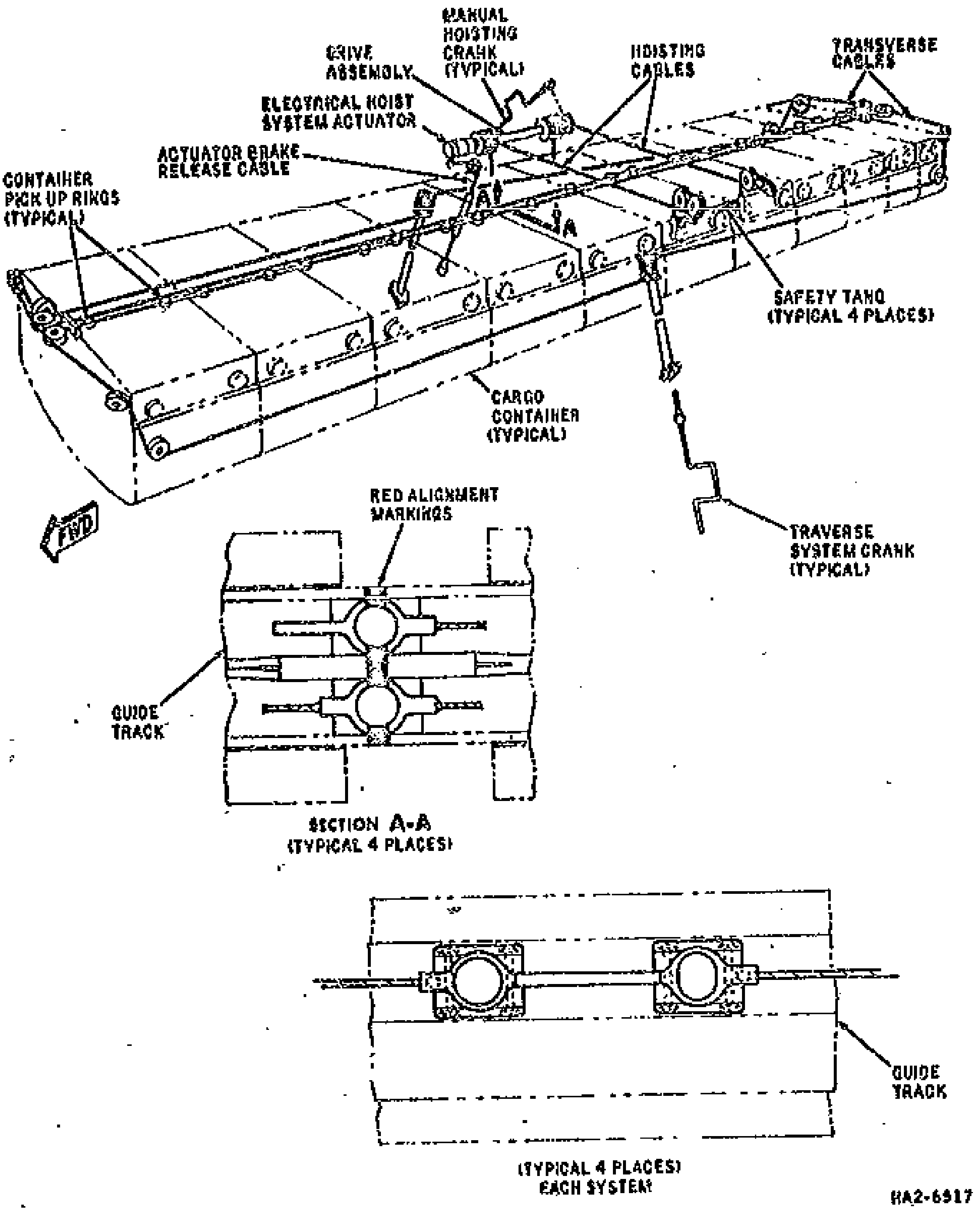


Forward Cargo Compartment Hoist and Traverse Systems
(DC-8-50/62)
Figure 201 (Sheet 1)



Aft Cargo Compartment Hoisting and Traverse Control System
(DC-8-50/62)
Figure 201 (Sheet 2)

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Forward and Aft Cargo Compartment Hoisting and Traverse Control
Systems -- Typical (DC-8-61)
Figure 201 (Sheet 3)

(4) Remove pick up ring stop from aft pulley bracket.

(5) Remove guard pins from aft pulley brackets.

(6) Remove cable by pulling ball terminal through pulley brackets.

(7) Disconnect forward cable from forward pick up ring.

(8) Remove pick up rings and cables from guide track.

(9) Remove pick up ring stop from forward center pulley bracket.

(10) Remove guard pins from forward pulley brackets.

(11) Remove cable by pulling the ball terminal through pulley brackets.

(12) Remove cable drum upper support bracket and three spacers from cable drum.

(13) Remove cable from cable drum.

(14) Remove cable drum lower support bracket and lift drum out of socket.

D. Install traverse system.

NOTE: Secure all cables with cotter pins.

(1) Install cable drum by lowering into socket.

(2) Secure cable drum lower support bracket.

(3) Install pick up rings and cables in guide tracks.

NOTE: Install pick up rings in order shown in Figure 201.

(4) Attach forward cable to forward pick up ring.

(5) Attach aft cable to aft pick up ring.

(6) Route cables through pulley brackets to cable drum.

(7) Wind forward cable around cable drum.

(8) Loosely connect turnbuckle joining fore and aft cables.

(9) Install guard pins in pulley brackets.

(10) Install three spacers and cable drum upper support bracket.

(11) Tighten turnbuckle.

(12) Adjust traverse system (see paragraph 3B).

(13) Test traverse system for normal operation (see paragraph 3C).

3. Adjustment/Test - Cargo Container Hoist and Traverse Systems

A. Adjust hoist system.

NOTE: The lifting tracks must be fully down to make adjustments.

(1) Remove cargo containers from cargo compartment.

(2) Open cargo hoist system circuit breakers.

WARNING: TAG AND SAFETY CIRCUIT BREAKERS.

(3) Remove cotter pins from lock latches.

(4) Adjust left lock latches to approximately mid-adjustment.

(5) Adjust right lock latches so that the right lifting track is slightly lower than the left.

NOTE: Measuring from top of fixed track to top of adjusting screw the length must be within 90 1/4 (±1/2) inches.

(6) Raise lifting track until one end of left track just contacts up stop.

NOTE: Lifting track should be aligned with fixed track but not under pressure.

(7) Tighten cable adjusting screw at other end of left lifting track until track end just contacts up stop.

(8) Adjust right lifting track cable adjusting screws to provide 5/16 (+1/16, -0) inch at up stops.

NOTE: The right lifting track should be 5/16 (+1/16, -0) inch below alignment with fixed track.

(9) Lower lifting tracks and attach 475 pounds to each track.

(10) Raise lifting tracks with weights to determine which up stop will be contacted first.

(11) Estimate number of turns the up stop adjusting screw will be required to rig stops to proper strike sequence.

NOTE: Friction contact between stop and track should be measured using a .010 feeler gauge.

NOTE: Proper strike sequence between up stops and lifting tracks:

Aft end of left track -	Friction contact with feeler gauge
Aft end of right track -	1/16 (±1/32) inch clearance
Fwd end of left track -	1/16 (±1/32) inch clearance
Fwd end of right track -	1/8 to 5/32 inch clearance

(12) Lower weighted lifting tracks and make estimated adjustments to up stop screws.

(13) Repeat steps 10 through 12 until proper striking sequence is obtained (see paragraph 2A(11)).

CAUTION: NO PART OF UPPER END OF CABLE BALL ADJUSTING SCREW MAY BE EXPOSED ABOVE TOP OF LIFTING TRACK SUPPORT.

(14) Install cotter pins in lock latches.

(15) Check brake release cable.

NOTE: Shoulder of pull ring fitting must just touch shoulder on rubber pressure seal.

(16) Check functioning of brake release.

NOTE: Lifting tracks may be pulled down slowly with brake released.

(17) Safety brake release cable pull ring with lockwire.

(18) Adjust cargo container wheel stops on both sides of airplane.

NOTE: When lifting track is against up stops the gap between safety tang and top of lifting track should be 3 1/16 inches.

(19) Check that upper surface of safety tang does not bottom on its support.

B. Adjust traverse system.

(1) Insert traverse system cranks and turn until turnbuckles are accessible.

(2) Adjust cable tension at turnbuckles (see Figure 202).

NOTE: Add 35 pounds to standard cable tension as shown on cable rigging chart for 1/8 inch cable.

(3) Move each traverse system to the unloaded position.

(4) Check for alignment of the center of the pick up rings with the markings on the fixed tracks.

(5) Install or remove shims at pick up ring stops to bring pick up rings into alignment with marks.

<u>NOTE</u>: It is permissible to have between 1/8 and 3/8 inch total thickness of shims at each stop.

(6) Move each traverse system to the loaded position.

(7) Check for alignment of the center of pick up rings with the markings on the fixed tracks.

(8) Install or remove shims at pick up ring stops to bring pick up rings into alignment with markings on the fixed tracks.

(9) Safety turnbuckles with lockwire.

C. Test cargo container loading system.

(1) Remove plug on right side of fuselage aft of the cargo loading door and insert hoist crank.

<u>WARNING</u>: THE MOTOR ACTUATOR MUST NOT BE OPERATED WHEN THE MANUAL HOIST CRANK IS ENGAGED.

<u>NOTE</u>: Crank must be turned until worm gear on drive assembly is engaged.

(2) Raise lifting tracks until aligned with fixed tracks.

(3) Check clearances between lifting tracks, up stops, and fixed tracks (see steps paragraphs 3A(8), 3A(11), and 3A(18)).

(4) Pull brake release cable and lower lifting tracks with hoist crank.

(5) Attach lifting tracks to cargo container.

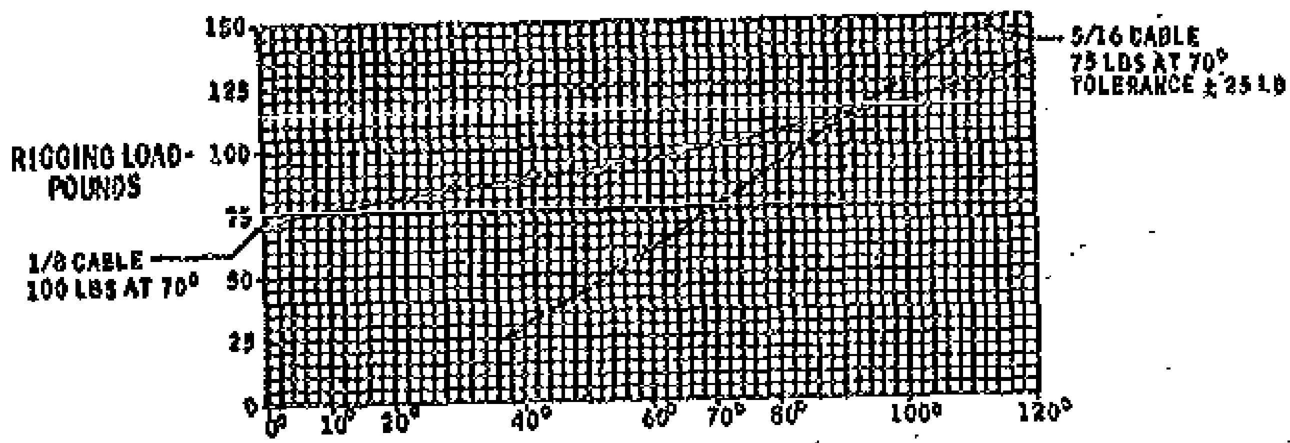
<u>NOTE</u>: Position direction pin on container so that arrow points forward.

<u>NOTE</u>: Make certain safety tangs are properly seated between the flanges on each wheel.

(6) Raise container to full up position.

(7) Remove hoist crank.

CABLE RIGGING CHART - DC-8



TEMPERATURE - DEGREES FAHRENHEIT

GRAPH SHOWING RIG LOAD vs TEMPERATURE
FOR DC-8-60 AIRCRAFT

NOTES:

1. ADD 35 POUNDS TENSION TO STANDARD VALUES FOR CARGO TRAVERSE SYSTEM 1/8 INCH CABLE.
2. GRAPH VALUES INCLUDE 10 PERCENT STRUCTURAL DEFLECTION.
3. RELIABLE TENSIOMETERS MUST BE USED FOR ADJUSTING RIGGING LOADS. THE ACCURACY OF RIGGING LOADS MUST BE MAINTAINED WITHIN +12% -10% ON 1/8 INCH CABLES AND LARGER, AND WITHIN ±5 POUNDS ON 1/16.

HA2-6514

Cable Rigging Tension Chart
Figure 202

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(8) Lower cargo container by a series of short pulls on brake release cable.

CAUTION: DO NOT LOWER CARGO CONTAINER WITH ONLY ONE PULL OF THE BRAKE RELEASE CABLE. THE CONTAINER WILL FALL DANGEROUSLY FAST WITH ONE PULL AND MAY CAUSE DAMAGE OR INJURY.

(9) Remove cargo container from lifting tracks.

(10) Raise lifting tracks until aligned with fixed tracks using the actuator.

(11) Check clearances between lifting tracks, up stops, and fixed tracks (see steps 3A(8), 3A(11), and 3A(18)).

NOTE: Release button when actuator stalls.

(12) Lower lifting tracks and connect to cargo container.

NOTE: Position direction pin on container so that arrow points forward.

(13) Raise cargo container to full up position.

CAUTION: GUIDE CONTAINER THROUGH DOOR OPENING AS IT IS RAISED TO PREVENT DAMAGE TO GUIDE RAILS OR CONTAINER.

(14) Check that direction pin on container properly engages pick up ring in traverse system.

(15) Turn left traverse system crank to move container one position forward.

NOTE: Container wheels will drop into detents in fixed track when in position.

(16) Load remaining cargo containers positioning direction pin alternately forward and aft.

(17) Lower lifting tracks slightly and check that safety stops prevent containers moving into door opening.

CARGO CONTAINERS

1. Description

   A. Eleven large fiberglas containers are used in the loading of the cargo compartments. The forward compartment has a capacity for five containers the aft compartment for six in the DC-8-62. In the DC-8-61 each lower cargo compartment has a capacity for eleven cargo containers. The containers are made of foam plastic covered with fiberglas. They are 72 inches long, 33 inches wide, and 44 inches deep, rectangular in shape with the bottom curved to fit the contour of the cargo compartment. The empty weight of each container is 85 pounds and each container has a maximum capacity of 1100 pounds of cargo.

   B. A pin is located on one end of the container on the top side. This pin engages the pickup ring in the traverse cable system in order that the container can be moved fore and aft along the sidewall track. On each end of the container, near the top surface, are two roller-type wheels. The container is supported on the hoisting track by these wheels during the lifting and lowering operations. These wheels roll along the sidewall track during fore and aft movements.

   C. The traverse direction of the container is controlled by the location of the pin.